PD-CAE-931

Health Training, Research and Development Project

Project No. 497-0273

Mid-Project Evaluation
Final Report

Jakarta, Indonesia

March 15, 1983

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1. EXECUTIVE SUMMARY

The Development of Health Services in Indonesia

In 1945 the Republic of Indonesia came into being as an independent, sovereign nation. Unfortunately it inherited a toll of ill-health among the worst in Asia. In the years that followed, progress was made toward the diminution of morbidity and mortality due to nutritional problems and the unrestricted effects of the environmental and communicable diseases due to ubiquitous disease vectors and limited means to combat them.

Health services were extended particularly through the construction and staffing of rural health centers and by programs to combat the major epidemic diseases including malaria. Gradually, through a series of Five-Year Plans, health conditions for this populous and widespread nation improved and it became clear that further progress was, to a great extent, dependent upon the ability to administer and manage health services and upon the capacity to produce the personnel needed to staff them.

For almost 20 years, the U.S. government has assisted Indonesia's efforts for better health. Beginning with malaria control, programs addressing improved sanitation, limitation of family size, better nutrition and, more recently those concerned with outreach of primary health care, research oriented toward definition and resolution of practical problems and the management of a vast public sector health service have predominated.

The Health Training, Research and Development Project (HTRD)

In 1977-8, a project was designed to improve the Ministry of Health's planning abilities at both central and provincial levels and to assist in the extension of primary health care, in particular through improved services to mothers and children.

The methodology of the project has been modified subsequently but it goals remain unchanged. As it is now being implemented its purposes are threefold: to improve health manpower development, management and information gathering for planning purposes, to encourage the conduct of research into problems impeding health care delivery and to assist the improvement and expansion of health education for the people. This project, entitled 'Health Training, Research and Development' (USAID Project 497-0273) was the subject of an agreement signed in 1978 and will terminate, in its present form, on September 30, 1984.

Mid-Term Evaluation of HTRD Project

A mid-term evaluation, the subject of this document, was conducted by a 3 person team from February 22 until March 15, 1983 in Indonesia in collaboration with officials of the Ministry of Health, Republic of Indonesia, USAID/Jakarta and others.

The evaluation was concentrated upon two of the three components of the project:

i) Health Planning, as it relates to the supply, demand and management of health professionals, allied health workers and ancillary personnel.

ii) Health Research and Development designed to improve the capacity of the National Institute for Health Research and Development and its centers to conduct research into health policy planning, administration, services and technology as they apply to the problems of Indonesia.

The purpose to be served by the evaluation is to provide the Government of Indonesia, USAID/Jakarta, and technical consultants with recommendations that will enable the implementation and management of the project to be improved; also to review the need and desirability for the project's continuation, extension or modification - possibly accompanied by additional technical and financial resources.

The Health Planning Sub-Project

The Health Planning Sub-Project consists of activities designed to (i) improve the capacity to plan, project, utilize and manage the large number (in excess of 110,000) of health workers employed by the MOH, and provincial public sector health systems, (ii) improve the utilization of staff through staffing norms and standards, using job-descriptions for these purposes, (iii) assist the Center for Education and Training (PUSDIKLAT), the institution charged with responsibility for regulation and production of nurses and workers in the allied health sciences, to fortify its role in the 'national training system', particularly at the provincial level, through training of health manpower planners, analysts and managers, (iv) assist the Bureau of Personnel to revise personnel management policies and analyze career development opportunities, (v) assist the Bureau of Planning to develop a manpower information system that will enable nationwide data to be gathered, analysed and used by the agencies responsible for planning, production and management of health personnel. Particular emphasis is placed on data flows from and to the administrative levels of the provinces and health centers (Puskesmas). Creation of linkages with the Bureaus of Planning, Personnel and with the Center for Education and Training at central and local levels are essential these purposes.

The Health Research and Development Sub-Project

The Health Research and Development Sub-Project has as its goal the improvement on the MOH's capacity to identify problems of health care delivery and management at both central and provincial levels, to analyse them effectively, to develop practical solutions and to monitor and evaluate their resolution. This is to be accomplished through the National Institute for Health Research and Development (LITBANKES) and its six peripheral research institutions.

The Research and Development Sub-Project, as originally conceived was and remains basically sound. The decision to award the overall contract to a minority, small business is history, but in retrospect it would have been wiser to separate the R&D sub-project and limit the competition to groups with demonstrated experience and success in institutional development of health research capability in LDC's. The contractor's failure to recruit the senior LTC for research management is undoubtedly the single factor most responsible for problems in implementation of the KOPA/MSH-LITBANGKES workplan.

Until the present time few planned activities have begun and most objectives are not being met. Indeed, many of most promising research initiatives at NIHRD are occurring outside the R&D sub-project through other USAID initiatives, NAMRU-2, CDC or other bilateral (IDRC-JICA) and multilateral agencies (TDR/WHO). The recent progress in developing high-priority proposals in health service research at P4K is largely attributable to an STC who can fill the original role of senior research management advisor. The prospects are now good that several client-oriented field health service research projects can be developed by the end of the present project.

USAID's Contributions to the HTRD Project

USAID's contributions to the two sub-projects have been in the form of Long and Short-Term technical consultants with expertise in the fields of manpower planning, training systems development, health service research and administration, personnel management and information services. These consultants have worked in counterpart relationship with officials of the Bureaus of Planning and Personnel, with the Center for Education and Training, with the National Institute for Health Research & Development and with health planners in 3 'path-finder' provinces.

Consultants have been assigned to work at both central and provincial levels. In the Health Planning Sub-Project particular efforts have been dedicated to the training of

trainers of provincial health planners, through seminars, workshops and consultation to impart skills in Case Identification, Writing, Task Analysis and Consulting Techniques.

In the Bureau of Planning, a long-term consultant has assisted in training counterparts in health manpower planning methodology and in developing the manpower component for the National Long-Term Health Development Plan and for the Fourth Five-Year Plan -- an activity that requires considerable input and analysis at provincial and local levels. Working papers, manuals, workshops and informal instruction have resulted from the consultant's efforts.

Efforts have also been made by the L.T. consultant, with assistance from S.T. Information Scientist in the preliminary steps leading to the construction of a Comprehensive Manpower Information System.

In the Center for Education and Training a L.T. consultant has focused upon data gathering from the multiple health training agencies coordinated by the Center. He has assisted in setting up an information-gathering methodology for central and provincial levels, conducted workshops and seminars, and provided consultation for training teachers of health manpower planners and managers in the 3 'path-finder' provinces. The consultant has been assisted by S.T. technical experts and has worked collaboratively with other project consultants in the fields of planning, information and educational technology.

The Research and Development Sub-Project has been assisted by the L.T. consultant working in association with the National Center for Health Research and Development and its agencies. He has been assisted by a S.T. technical expert from the Johns Hopkins School of Public Health. Activities have included seminars, workshops and consultancy in the identification of problems derived from health care delivery, management and organization. The capacity to undertake this 'client-oriented' research is to be reinforced at the central and provincial levels, addressing problems identified by provincial planners, managers, health facility and teaching institution administrators, and those at the local and health center levels.

Findings of Evaluation Team

Through a series of interviews with key MOH officials, USAID/Jakarta staff, Project LT and ST consultants and the review of a considerable body of documentation, the Evaluation Team found the project to be well-conceived and necessary. It

has undergone modification since its inception in 1977-78, as documented in specific sub-project workplans, focusing upon the manpower aspect of health planning training systems development and upon 'client-oriented' research capabilities. Activities at the provincial and local levels were found to be appropriately emphasized.

The Health Planning Sub-project has progressed towards its objectives, but subject to a series of delays and deficiencies. These are atributable to higher priority MOH activities, staff shortages, changes and reorganization, and to restricted information flow particularly between central and provincial data sources. Despite these difficulties, the consultants have established excellent working relationships with their counterparts and have encountered interest, enthusiasm and a willingness to learn. Many problems originate from a traditional, highly centralized decision-making hierarchy, the resolution of which will depend upon engendering confidence and ability to make rational decisions locally.

The need for well constructed, useful job descriptions has been identified as key to the success of this subproject. Collaboration with the Bureau of Personnel has been delayed and is now scheduled to begin in May 1983. The Evaluation Team views the delay as a major impediment to the sub-project but believes that the way is now clear for progress to be resumed.

Activities with the Bureau of Planning and with the Center for Education Training are now progressing satisfactorily. The development of the Comprehensive Manpower Information System has experienced several changes of direction and is now to be incorporated into a comprehensive Management System that will contain several other information elements including the Health Center (Puskesmas) sub-system.

The Health Research and Development project has attained little success. The project consultants have conducted educational activities at both central (LITBANKES) and provincial levels designed to stimulate identification and problem-solving research projects. One project, a study of staff activities in a group of Health Centers, has been completed. The information gathered has been utilized extensively in the construction of the Fourth Five-Year Plan. A number of other projects are under consideration.

Responsibility for the slow rate of progress must be placed upon the USAID contractor who has been unable to find an LT consultant with the necessary prestige, expertise and institutional backing that would ensure his credibility.

Recommendations of Evaluation Team

The Evaluation team recommends that the project continue with expansion and redirection. In particular, changes in the procurement of LT and ST consultants are proposed.

The Health Planning Sub-Project should continue as presently constituted, with additions of LT and ST consultants to work at the provincial level and provision of training in management and administration for up to 40 institute principals, trainers and central staff, either abroad or in-country. Expansion of the Center for Education and Training's staff is recommended to the MOH, also reinforcement of facilities locally.

Sequential expansion of activities to 8 new provinces over three years is also proposed. Review of the plans for a Comprehensive Manpower Information System in May-June 1983 by a ST consultant is recommended.

Recommendations for the redesign of the Research and Development Sub-Project are made. In particular linkages with other national and international research institutions are proposed using the 'paired investigator' concept, among others. The recruitment of a LT consultant with extensive experience in the field, with knowledge of research management, with a record of substantial accomplishment and with a strong and appropriate institutional backing is recommended. ST technical expertise is also required on an 'as needed' basis.

Recommendations for alternatives have been proposed for USAID-assisted interventions in the health sector in Indonesia. These include extension of integrated health activities to the kabupaten level including strengthing of planning, management, manpower and research, together with a series of categorical programs designed to reduce mortality of infancy and early childhood. Exploration of needs to assist other administrative and executive units basic to health care delivery at central, provincial and kabupaten levels is recommended.

Finally, programs directed toward the elimination of selected nutritional deficiencies including goiter, hypovitaminosis A and iron-deficiency anemia should be considered.

2. STATEMENT OF MAJOR FINDINGS

The Health Training, Research and Devlopment project was designed to address priorities defined in the Third Five-Year Development Plan and the need for better, more efficient health care through manpower training, management, administration, and problem identification and solving. Although, for the purposes of organization, the project has been described in 3 sub-projects (of which 2 only are evaluated in this document), and these in turn have been further divided, it is important to recognize that all are interdependent, one reinforcing another. This is clearly seen when the objectives and methodologies of the different activities are reviewed. For the same reason, each project consultant may contribute to several apparently different but related activities.

It should be born in mind, while reviewing this project's accomplishments, that while compartmentalization is a necessary management and descriptive device, it has the disadvantage of masking the cohesiveness that exists in concept and practice.

2.1. Health Planning Sub-Project.

Without exception the elements comprising this subproject have been subjected to delays, in some cases up to one year. This has come about because of the need to dedicate all available manpower and resources to the preparation of the Long-Range Development Plan and, more recently, to the Fourth Five-Year Plan.

2.1.1. Planning for Manpower.

Major accomplishments:

- Manpower Planning Unit established in Bureau of Planning
- Assistance in identification of 3 'path-finder' provinces
- Planning, data collection and analysis conducted for LTHP and Repelita IV.
- Seminar on manpower planning and research
- Technical assistance to working groups
- Design and teaching in seminars at central and provincial levels
- Preparation of position papers on topics requested by MOH
- Preparation of manual for use by provincial planners
- Consultation at central and provincial levels
- On-the-job training of counterparts

Present Status: Considerable progress toward objectives has been made. Activities should continue with expansion to other provinces and at kabupaten levels.

2.1.2. Staff Utilization.

Major Accomplishments:

- o Arranged visit of MOH officials to health manpower planning unit in 4 countries
- o Staff papers on staffing norms
- o Consultant appointment in response to request from Bureau of Personnel

Present Status: Activities have been greatly delayed. Major objectives still valid. Way appears clear for activities to begin in May 1983.

2.1.3. Work with Center for Education and Training. (PUSDIKLAT)

Major Accomplishments:

- o Project office established and counterpart working group appointed
- o Training of staff by workshops at central and provincial levels
- o Assistance to Training-of-trainer teams at provincial level
- o S.T. consultant on Case Development, Consulting Skills.
- o Chief of PUSDIKLAT was member of team visiting manpower planning units in 4 countries
- o Manual for use by central and provincial staff in preparation

Present Status: Activity now making good progress. Consultants to 2 'path-finder' provinces to be in place shortly - one in place February 1, 1983. PUSDIKLAT would like to extend project to 8 new provinces and requests assistance in training core teachers and staff in management and administration.

2.1.4. Personnel Administration and Staff Career Development.

Major Accomplishments:

- o List of personnel and needed career information prepared
- o Assisted workshop for central and provincial staff on data collection
- o Procedure manual in preparation

Present Status: Activity has been greatly delayed. Major objectives still valid. Activity linked with Staff Utilization (see 2.1.2)

2.1.5. Comprehensive Manpower Information System.
Major Accomplishments:
- o Collection and analysis of personnel policies
- o Health Center Utilization Study conducted
- o Paper on 'Career information requirements' prepared
- o Provincial staff training in manpower data collection in progress
- o Manpower situation survey and analysis of all health workers completed

Present Status: A Center for Health Management Information, MOH is in process of formation. Design of Comprehensive Manpower Information System under study as part of Management Information System. Further direction will be clarified in June 1983.

2.2. Research and Development Sub-Project.

2.2.1. Manpower Development.

Major Accomplishment:
- o Temporary 'core' group for liason with consultant established
- o 4 courses conducted for NIHRD staff
- o Courses on 'Scientific Report Writing' in Jakarta and Surabaya
- o 2 NIHRD staff member attended course on "Management of Research and Development" at the Denver Research Institute
- o 1 NIHRD staff member attended International Nutrition Congress San Diego, Calif.

Present Status: Since departure of Sub-Project's LT consultant no training courses have been offered. No core group established to provide in-service training in research.

2.2.2. Research Management.
Major accomplishments.
- o Dr. Carl Taylor, as ST consultant developed plan for health service research 'mapping' exercise as basis for identification of research projects at field level
- o one research project conducted (Study of Staff Time Utilization in PUSKESMAS)
- o 2 proposals in pharmacy and 2 in antibiotic usage under review

Present Status: Project stagnant, largely due to failure of KOBA to provide suitably qualified LT consultant. Potential for active program exists if project redesigned.

3. RECOMMENDATIONS

3.1. General

1. USAID/Jakarta should continue to support the Health Training, Research and Development project, which the Evaluation Team believes to be necessary and well-conceived. Specific recommendations for modification are made and alternatives have been suggested.

2. USAID/Jakarta is recommended to ensure that any extensions to the project and/or its alternatives should, as their main thrust, focus upon the improvement of health services at the kabupaten level.

3. USAID/Jakarta is recommended to explore development of a functional and administrative integration of the University of Indonesia School of Public Health/Johns Hopkins activities with the Health Training, Research and Development project.

4. USAID/Jakarta is recommended to consider the establishment of a Project Steering Committee that includes representatives of the Bureaus of Planning and Personnel, PUSDIKLAT and LITBANGKES, in the interest of improved coordination, information exchange and project development. This committee would also coordinate the relationships of the Project with the activities of the Johns Hopkins University and other international agencies.

3.2. Health Planning Sub-Project

1. USAID/Jakarta should make provision for the continuation of L.T. consultant services in manpower planning, staff utilization and personnel administration for approximately 2 years after termination of present contract in September 1983. Appropriate S.T. consultant in personnel administration should also be included.

2. USAID/Jakarta should provide 2 Person-Months of consultant services to the comprehensive Manpower Information System development during May and June 1983. At that time the need for additional long-term assistance should be reviewed.

3. USAID/Jakarta should continue to support activities of PUSDIKLAT, particularly as they expand to the provincial and kabupaten levels. In addition to the three 'path finder' provinces now receiving consultant support, support for an additional 8 at

the level of 6 Person-Months per province should be considered. Not more than three new provinces should be assisted simultaneously. A project life of some 2 years is anticipated to accomplish this. L.T. assistance to central PUSDIKLAT should also continue for life-of-project. S.T. consultants in various technical fields should be provided to work at the provincial level. Approximately 2-3 Person-Months per province will be needed. Where possible, the instructional courses assisted by the consultants should be continuous and not broken up into a series of discontinuous phases taught over several months.

4. USAID/Jakarta should review the reporting systems by which the progress toward objectives of LT and ST consultants is monitored. Work plans should be reviewed at regular intervals, updated and modified as necessary. It is recommended that a system of management-by-objectives appropriate to the project be devised and implemented. The system should include improved record keeping as a means of accountability for project outputs. Freer and more frequent communication between USAID and the LT and ST consultants will contribute importantly to more efficient management.

5. USAID/Jakarta is recommended to provide training in management and administration to core training staff and administrators, including 8 principals of National Training Centers, 3 trainers of teachers of management and planning in each of 8 provinces, and 8-10 staff of the Center for Education and Training and from other Directorates General. Training of up to 6 months duration either in the U.S. or regionally is an alternative to arranging for a series of special courses in Indonesia.

6. The Ministry of Health, recognizing the importance of PUSDIKLAT and its mission, should endeavour to improve its efficiency by:

   a. Strengthening the [illegible], and the personnel and facilities of which they are part, at the provincial and sub-provincial levels. This could include, for example, provision of libraries for use of health planners at the provincial level.
   b. Reinforcement of central PUSDIKLAT through appointment of additional full-time staff in order to strengthen their capabilities for central planning and assistance to provinces.

3.3. Research and Development sub-project

1. USAID/Jakarta should continue efforts to identify by direct personal service contract an LTC or a negotiated STC arrangement to provide essential senior consultation in research management.

2. USAID/Jakarta should continue to support the P4K research "mapping" exercise, the "client-oriented" research workshops provided that linkage is assured with the mapping exercise, and selected high priority health research proposals for implementation at the community level.

3. USAID/Jakarta should encourage Dr. Carl E. Taylor to develop further with P4K and NIHRD the concept proposal for a national network of field research areas responsive to needs of the provincial health structure and local universities.

4. USAID/Jakarta in collaboration with the Government of Indonesia should explore the possibility that assistance in the areas of institutional and extramural research development and management could be provided by U.S. or non-U.S. national or regional research institutions. The National Institute for Allergic and Infectious Diseases, National Institutes of Health, Bethesda, Md is prepared to offer scientific and/or research administration consultation in these areas.

3.4. Recommendations Related to Alternatives

1. USAID/Jakarta should consider assistance to the development of a systematic approach for the improvement of health care delivery using selected 'path-finder' kabupatens for the purposes of strengthening planning, management, manpower, and research.

2. USAID/Jakarta should consider a series of integrated health interventions at the kabupaten level designed to assist the MOH in the reduction of infant and early childhood mortality through a combination of programs of maternal and child health, family planning, nutrition, immunization, basic sanitation, diarrheal and respiratory disease control and health/nutrition education. The training component of these interventions should concentrate upon improving the skills and utilization of nursing, midwifery and ancillary health personnel.

3. USAID/Jakarta should evaluate the need to provide assistance to other GOI administrative and executive units that provide support basic to health care delivery. These units may include the Departments concerned with finance, statistics, logistics, supplies, and others.

4. USAID/Jakarta should consider assistance to planning and implementing a series of nationwide programs designed to reduce progressively the incidence of goiter, hypovitaminosis A and iron-deficiency anemia. A limited program of scientific exchange of information between national and international scientists working in the field of nutrition could focus on analysis and review of research in specific nutritional problems and provide an opportunity to design research initiatives and field implementation strategies.

4.1 Introduction, Project Background and Goal of Evaluation

Following the Second World War and the termination of Japanese occupation, the newly independent Republic of Indonesia, in 1945, was faced with health conditions among the severest in Asia. High maternal and child death rates, widespread nutritional problems and their sequelae, high rates of morbidity and mortality due to the environmental and communicable diseases were compounded by an increasing birth rate, areas of high population density with substandard housing, widespread presence of disease vectors and health services limited in quality and outreach.

In the subsequent almost forty years, great strides for the improvement of the nation's health have been made, as evidenced by declining mortality indicators, improved environmental health including vector control and expanded health coverage.

These improvements have come about as a result of the successful efforts of the Government of Indonesia, assisted by selected international donors and lenders, including the U.S. Agency for International Development.

The Ministry of Health, through programs designed to accomplish the objectives of a series of 5 year Plans has extended rural health services through the construction of health care centers and their staffing by trained professional and paramedical health workers. To accomplish this, major effort was required to improve and expand institutions for the production of doctors, nurses, allied health personnel and for the training of village health workers. Planners, administrators and those concerned with skills in the management and logistics of health were also needed.

For nearly 20 years, USAID has assisted the Government of Indonesia towards its health goals. Beginning in the 1960's with assistance in malaria control, projects designed to improve the capacity for health-related research and development, training of sanitarians, outreach programs designed to reach all 27 provinces, nutritional surveillance, family planning and nutrition education are among USAID's collaborative programs with the GOI.

While the GOI Second Five-Year Plan placed emphasis on control of infectious diseases and construction of health centers, the Third Five-Year Plan would place emphasis on the production of health manpower, increased effectiveness and improved management skills and upon research development in problems arising from the health system itself, in particular those related to health data collection and information processing.

In accordance with the Agency's developmental goals, it was appropriate that USAID should support projects in line with the Plan's objectives and in 1977-78 the Health Training, Research and Development (Project NO. 497-0273), the subject of this mid-term evaluation, was designed. As originally planned, it was intended to (i) enhance the MOH's capacity to undertake health planning thereby strengthening the institutional basis of the planning process at both central and provincial levels, (ii) strengthen the capability of the National Institute for Health Research and Development to conduct research into priority planning and policy issues and the development of appropriate technologies for health services delivery; (iii) improve the capacity of the Directorate of Health Education in planning, operations and evaluation at the central level and in selected provinces; (iv) improve the training of primary health nurses through the development of an evaluation system by which the training programs and the deployment of nurses in health services can be monitored and evaluated; (v) assist in the improvement of efficiency and coverage of the Expanded Program for Immunization for children and mothers in collaboration with other international agencies through technical assistance and training provided by USAID consultants.

The project has undergone modification subsequently and has been supported by other USAID complementory projects. These included, in 1981, the Comprehensive Health Improvement Program-Province Specific (CHIPPS) designed to encourage decentralization and augument training, planning and management capabilities of officials in selected provinces, and in the same year, a program designed to improve the levels of teaching and research at the University of Indonesia Faculty of Public Health. The technical assistance necessary to accomplish this is provided by consultants from the Johns Hopkins University School of Public Health.

In its present form, the Health Training Research and Development project, modified in accordance with the Five-Year Development Plan, consists of three sub-projects:

(i.) Health Planning Subproject, "to assist the MOH in strengthening its internal personnel management, manpower development and health information system".

(ii.) Health Research and Development Sub-Project "to improve the capability of the National Institute for Health Research and Development and its 6 research centers to undertake high quality research oriented to priority health policy planning and to the development of health services administration, delivery, and technology appropriate to the Indonesian Setting".

(iii.) Health Education Sub-Project, "to amend the Directorate of Health Education in planning, implementing and evaluating health educational initiatives at both national and provincial levels".

The goal of the evaluation is "to review the technical and institutional-building progress of the Research and Development and Health Planning Sub-projects, in order to enable the Mission to:

(i) improve the technical implementation and on-going management of the project; and

(ii) amend the existing project design for a possible extension of project life, additional funding, and technical assistance.

The Evaluation Report will be used by USAID, GOI counterparts, and project technical advisors, as appropriate, for both purposes outlined above"

(quoted from Plan and Workscope for the Mid-Project Evaluation of the Health Training, Research and Development Project, Feb. 22-March 15, 1983, USAID/Indonesia)

4.2 The Evaluation Team - Composition and Responsibilities

The evaluation team comprised the following members:

1) Dr. Abraham Horwitz, M.D., M.P.H. Consultant former Director, Pan American Health Organization/Regional Office for the Americas, WHO, Washington, D.C.
2) Dr. E. Croft Long, M.B., B.S., Ph.D. Consultant. Vice-President International Division, Project HOPE, Millwood, Va.
3) Dr. Karl Western, M.D., D.T.P.H, Assistant Director for International Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Md.

Dr. Horwitz' responsibilities included overall direction of the Evaluation Team's activities, determination of specific task assignments, coordination and technical assistance in review and evaluation of the Research and Development and Health Planning Sub-Projects. (February 21-March 4; March 11-15, 1983)

Dr. Western's principal responsibility was for the review and evaluation of the Research and Development Sub-Project. This included visit by the consultant to the Health Service Research and Development Center, (P4K) Surabaya on March 1-2, 1983. (February 21-March 6, 1983).

Dr. Long's principal responsibility was for the review and evaluation of Health Planning Subproject. He also was responsible for assembling the Team's Report for review by the Chief of Party. (February 21-March 15, 1983).

4.3. Methodology.

During the Evaluation Team's residence in Indonesia, the following methods were utilized to gather data upon which the Final Report, including recommendations were based:

- o review of relevant USAID, Government of Indonesia, WHO and other documentation (see Appendix 5.2)
- o discussion with USAID, Government of Indonesia, WHO officials, KOBA/MSH consultants and others. (see Appendix 5.3).
- o observations of appropriate institutions in Jakarta and Surabaya.

Because of limited time available, the Team was unable to visit health facilities and research clients at the Provincial and Kabupaten levels.

4.4. RESEARCH AND DEVELOPMENT SUB-PROJECT

This sub-project includes a major research component having to do with development of a nutrition surveillance system developed by the Government of Indonesia with assistance from Cornell University.

The surveillance system has been the subject of two independent evaluations and a third is to be conducted shortly. Consequently, it is not reviewed in this Report.

The Evaluation Team understands that significant progress has been made in the organization of an Early Warning Information Intervention System (E.W.I.I.S.) in Central Lombok.

4.4.1 Manpower Development

4.4.1.a. Improvement of institutional capability in developing and utilizing appropriate research methodologies

LITBANGKES has organized four of the six NIHRD Center Directors to serve as a Temporary Core Group. This Temporary Core Group was active during Dr. Steven Solter's LTC assignment (October 1980-October 1982) in the organization and teaching of four in-service training courses on 1) principles of epidemiology; 2) research design; 3) data analysis and 4) data processing. Approximately 25 staff attended each course

(names, titles, not available). These general research in-service training courses have not continued after Dr. Solter's departure.

With the exception of Dr. Ignatius Setiady (Health Ecology Research Centre) no Temporary Core Group member has received short-term training under Project 0273. In 1981 Dr. Setiady went on a study tour during which he attended a two week International Course on Environmental Management in Developing Countries (Environmental Research and Technology - Concord, MA) and visited the Massachusetts Institute of Technology, the Centers for Disease Control (Atlanta), and the School of Public Health, University of Texas (Houston). In view of Dr. Setiady's primary background and experience in communicable disease epidemiology this short study tour was appropriate.

The team found no significant movement towards the formation of a Future Core Group, organized mechanisms for in-house research methodology consultation, or continuing the in-service training program in research methodology following Dr. Solter's departure.

In addition to the courses organized by the Temporary Core Group and Dr. Solter, Ms. Frances Porcher (Science Writer, CDC, Atlanta) came as an STC in October 1981 to conduct short courses on "Scientific Report Writing" at NIHRD (Djakarta) and P4K (Surabaya). The Djakarta course consisted of 60 participants, including Professor Loedin and five Center Directors with good English background and experience with writing and editing scientific documents. The course in Surabaya involved 25 participants from P4K staff and Airlangga University who generally had less experience. These two courses seem to have been particularly well-conceived, organized and appreciated. Greatest areas for future effort (aside from writing in English as a second language) were hypotheses formulation, analysis of data, and interpreation of the results.

4.4.1.b. Establishing a routine process of international contacts and attendance of advanced courses for senior research staff.

NIHRD has not yet established an organized process for the identification, management, evaluation, and follow-up of short study tours or short advanced training abroad.

In addition to Dr. Setiady's previously mentioned short course and visits to Boston, Atlanta, and Houston, the Evaluation Team identified the following activities:

Aug 81	Dr. Muhilal XII International Biochemistry Nutrition Nutrition Research Centre	Nutrition Congress (San Diego: 16-21 VIII/81)
Nov 81	Mr. Soemarlan Secretary, NIHRD Mr. Nazazi Soebagin Administrative Officer, P4K	Training Course in Research and Development for Managers (Denver, 6 weeks) Short visits to Washington, D.C. area (National Institutes of Health, National Center for Health Statistics, John Hopkins).

The visit to NIH was very brief and involved only a review of international award mechanisms and activities rather than substantative discussions on Indonesian research priorities and interests with research managers. These activities are quite appropriate for the individuals involved, but should be developed as part of an organized program. The relatively low level of activities makes it difficult to evaluate their utility. Furthermore, at least one NIHRD scientist approved in 1981 for attendance at a sanitary engineering course cancelled by the organizer was not rescheduled for the 1982 course for reasons that are not obvious.

4.4.1.c. Increasing the quality and quantity of research support staff.

As previously stated, the Future Core Group has not been established to provide sustained in-service training to research support (e.g. non-scientific) NIHRD staff.

4.4.2 Research Management

4.4.2.a. Improved communication of research results.

At the present time NIHRD does not have a satisfactory method of communicating research results either to the Indonesian and international scientific community or health professionals who should apply the new results. Although individual centers do summarize yearly activities in

Indonesian, there is presently no NIHRD Annual Report in Indonesian or English, regular NIHRD scientific journal, monograph or seminar series. Presentations by Indonesian scientists at international scientific conferences should be expanded. NIHRD does not appear to have an organized "public information" office to prepare summaries of research results for dissemination to the general health worker, concerned citizens or the media.

A number of scientific articles published in referred scientific journals have resulted from linkages with NAMRU-2 or US based institutions. NIHRD has organized Working Groups on dengue hemorrhagic fever, diarrhea, acute respiratory infections, filariasis, and malaria to share information and discuss future activities. These Working Groups involve representatives from universities and community health workers but pre-dated Project 0273. The impetus for their formation is largely due to NAMRU-2 research interests in these areas and the need to achieve a consensus within BIOMEDIS, LITBANGKES, and Indonesia before initiating field activities.

Among the Centers, BIOMEDIS and the Drug Research Centre seem to communicate effectively with "key clients" in CDC, FDA, university departments, and the communities on which they carry out field research. (We were told that this is also so at the Nutrition Research Centre). The Health Ecology Centre is well-connected internally within NIHRD and "key clients" in its infectious diseases, vector biology, and physical environment activities but less so in its Divisions of Health Management Research and Evaluation and Systems Development. Communication and coordination between these two divisions and the Health Services Research and Development Centre (P4K/Surabaya) within NIHRD needs particular attention. As the Cancer and Radiology Research Centre becomes more broadly based in chronic diseases, its natural constituency will become more clearly defined.

4.4.2.b. Increased collaboration with consumers in problem identification, problem formulation, and the implementation of research results.

As indicated above, BIOMEDIS, the Drug Research Centre, and to a lesser extent the Health Ecology Centre have developed reasonably effective collaboration in problem identification and project formulation along categorical disease lines. Within NIHRD, however, there remains disatisfaction about the effective communication and implementation of research results. The extent to which this concern is valid was difficult to evaluate in the time available because of limited access to CDC, FDA and field staff.

It is clear, however, that the NIHRD policy of promoting "client-oriented" research must involve all Centers in effective interaction with program managers and health service proffessionals at the district and community levels.

Progress to date involves the recent initiation of a health service research "mapping" exercise at P4K which involves four multidisciplinary task forces concerned with 1) manpower; 2) management; 3) district (Kabupaten) health services; and 4) local health services. Each task force is expected to reach four "milestones" during the exercise); 1) definition of research needs; 2) formulation of appropriate research questions; 3) identification of specific health service research projects; and 4) selection of approximately six high priority and feasible projects for submission to LITBANGKES and possible USAID Project 0273 funding.

Dr. Carl E. Taylor, Professor of international Health, School of Hygiene and Public Health, Johns Hopkins University has been recruited by the USAID/Jakarta Mission to spend January-March 1983 as a STC in the Research and Development Sub-Project. While his functional responsibilities were originally NIHRD-wide, time constraints have resulted in his concentrating on P4K and the health service research "mapping" exercise. Professor Taylor has experience with the "mapping" approach to developing government-sponsored targeted research which maintains high scientific standards and professional satisfaction of participating scientists at the U.S. National Academy of Sciences. This current STC assignment has, therefore, evolved as an innovative effort in its own right to adapt the NAS "mapping" approach to health service research in Indonesia. If successful, similar Center-level exercises could build on the P4K experience involving communicable diseases, pharmaceuticals, environmental sanitation, nutrition, and chronic diseases.

The initial promise of the P4K health service research "mapping" exercise makes it very attractive to link it with the P4K proposal to seek Project 0273 funding for three series consisting of three workshops apiece on "Client Oriented Research Activities Strengthening". The three cohorts would consist of 1) Paired P4K researchers and clients; 2) Paired research workers elsewhere in NIHRD and clients; 3) Paired researchers from various research centers/universities and their clients. This exercise proposed to begin in April 1983 would develop five research proposals for evalution in November 1983 and implementation by June 1984. Project 0273 is being asked to fund the nine sessions and US consultants (Hornby, Lynton, Mico) as well as unspecified Indonesian consultants for a package budgeted at Rps. 78,000,000 (US $112,000).

Since the P4K "mapping" exercise already pairs P4K researchers and clients to select high priority and appropriate research projects and the "mapping" process can be applied elsewhere in NIHRD, the opportunity to coordinate these activities and catalyze the development of research proposals should be mutually beneficial and cost-effective.

To date, Project 0273 has funded only one research project carried out by P4K at the request of the Bureaus of Planning and Personnel and the Directorate-General for Community Health Services, Ministry of Health. This commissioned study began in October 1981 to document time utilization by staff in selected PUSKESMAS, identify differences between most and least effective health centers, and make recommendations for increased effectiveness and staff training. The study confirmed most of the observations carried out by NIHRD in 1974, 1976, and 1980. The March 1982 deadline limited the study to six months, a sample of eight facilities in two provinces, and limited scope. While implying that PUKESMAS staff utilization had not improved dramatically in eight years, the authors make it clear that the findings may not be representative for Indonesia. Discussion of how the Ministry intends to use this report in health manpower development and training is included elsewhere.

NIHRD Centers, particularly BIOMEDIS, provided the Evaluation Team with descriptions of the 1981/1982 research projects. It proved difficult to document what proportion have "clients" as co-investigators. If single author abstracts or reports are taken as an index of non-involvement, approximately 80% of projects have no obvious "client" involvement. NIHRD reports and publications, however, frequently include Ministry, university and local health officials as co-authors or prominently in the acknowledgements.

The initial failure by KOBA/MSH to recruit a senior research management LTC in 1980 severly damaged the prospects for achieving Project 0273's research management objectives.

Dr. Solter, the second LTC from October 1980-October 1982 is a mid-career medical epidemiologist with extensive experience in development and management of health services in Iran and Afganistan. In retrospect, it was unrealistic to expect him to continue with his original responsibilities and also function as the senior USAID advisor to the NIHRD Director in biomedical research and research management. At present no LTC is assigned to the Research and Development Sub-Project.

The recent recruitment of Dr. Carl E. Taylor as an STC in this capacity and the progress underway since January 1983 supports the contention that the initial plans during years 1-2 remain sound and that routine client-researcher collaboration is feasible.

4.4.2.c. Increased financial support for high priority research.

To date Project 0273 has had no apparent role in establishment of a systematic, institutional peer-review process for the identification and development of scientifically meritorious projects within NIHRD. The present review process is more consistent with a second level review by senior research administrators to determine program relevance and priority.

The single research project funded under Project 0273 was directed towards improving the effectiveness of health services delivery.

The health service research "mapping" exercise should identify high priority research areas for P4K. Similar "mapping" exercises of P4K research areas may also involve other elements of NIHRD.

To date the one P4K project has been funded and completed in April 1982. The Drug Research Centre has two proposals in pharmacist education and two dealing with the epidemiology of antibiotic usage in health services and patient self-medication. P4K expects to develop approximately six projects for sub-project funding as a result of the health service research "mapping" exercises and client-oriented research workshops.

BIOMEDIS and Health Ecology have relied more heavily on collaboration with NAMRU-2, USAID/Washington research mechanisms (BOSTID Vector Biology Grant Program); WHO, and NIH as sources of research support. They apparently have received little encouragement from KOBA/MSH to compete for sub-project research funds. While the LTC's personal backgrounds and scientific interests mesh most closely with P4K, it is puzzling that the documentation provided to the Evaluation Team makes no mention of the presence of NAMRU-2 and its extensive collaborative relationship with NIHRD in epidemiology, field research, training in laboratory techniques and research methodology. It is also not clear why KOBA/MSH did not build upon the extensive scientific contacts and institutional linkages already existing between NIHRD and US training and research facilities in the implementation of the R&D

Sub-Project. This includes, to a certain extent, other USAID supported initiatives in Indonesia such as the Health Development Planning and Management Project (Johns Hopkins) with the School of Public Health, the Nutritional Surveillance Project (Cornell) at NIHRD and the Indonesia Comprehensive Health Improvement Program (CHIPPS) Project.

Additional collaborative activities with US scientists/ institutions discovered during interviews with NIHRD staff include the following:

Center for Disease Control		epidemiology dengue immunization programs
University of Maryland	Dr. Levine	diarrheal disease vaccine development
Harvard	Dr. Piessen	tropical disease research immunology
Tufts	Dr. Levy	microbiology
FDA	Dr. Marclark	pertussis vaccine, toxicology, drug control
Hawaii	Dr. Rosen	dengue, arboviruses
Texas	Dr. Stallones	epidemiology, environmental health
Boston University		medicinal chemistry
NIH	Dr. Gajdusak	slow virus infections

Promotion of scientist-to-scientist and of institutional linkages has quite appropriately been emphasized to foster self-sufficiency within Indonesia. Strengthening of NIHRD institutional research capacity and mechanisms will improve by promoting exchange with U.S. and other international research institutions through mechanisms already provided for in the work plan.

R&D Subproject technical assistance has been effectively conceived, but the initial work plan emphasized the development and management approach rather than techniques which have proven successful in strengthening health research institutions. In recent months activities appropriate to the development of health service research are underway. Still, except for one LTC and three STC's (Carl Taylor, Morris Schaeffer, and Frances Porcher) have evolved rather slowly.

The present project should continue as proposed for health services research. Remaining sub-project research funds should be reserved for priority projects stemming from the mapping exercise and the client-oriented research seminars.

New activities, however, should also lay emphasis on targeted, high-priority biomedical research initiatives.

It would be mutually beneficial to establish collaboratives exchanges between biomedical research institutions in the U.S. and elsewhere and the National Institute for Research and Development including its research centers in Indonesia.

It is suggested that the first step should be a series of exploratory discussions between representatives of the National Institutes for Research and Development and NIH and other research institutions in the USA in order to define mutual interests and fields of research.

4.4.2.d. Improved research management.

There has been no significant progress under the R&D Subproject in implementing an effective research monitoring, impact evaluation, and an annual review of the preceeding years research experience.

The Evaluation Team still believes that identification and recruitment of a senior experienced research manager as an LTC is essential to achieve this objective. In view of previous frustrations and delays, USAID should consider immediate implementation of a personal services contract as an interim measure for the duration of the present subproject or until a new RFP is developed and awarded in the health research area.

4.4.2.e. Increased effective cooperation with extramural research resources.

As previously discussed there has been little progress made toward the systematic collection and dissemination of health research information from LITBANGKES to extramural research resources within and outside Indonesia.

To date, NIHRD has not determined and promulgated national biomedical and health service research priorities to the extramural research community. External applications currently compete with NIHRD staff scientists for the same pool of funds (although they are evaluated in a separate review meeting). Extramural awards are given through a grant process, but the scientific review, priority ranking on scientific merit and program relevance needs further refinement. As a considerable portion of external applications to NIHRD are expected to be in the operational and applied research areas, the contract mechanism may be a more appropriate approach to

monitoring external research, receiving reports on time, and maintaining fiscal accountability. Neither grant nor contract management mechanisms seem well-developed or operational. A full-time manager of the LITBANGKES extramural research program would be valuable.

LITBANGKES has the legal responsibility for health research in Indonesia. In addition, NIHRD leadership and the scientific community recognizes that the universities, medical schools, and emerging schools of public health constitute a far larger research manpower and resource pool than NIHRD staff. Extramural resources have technical skills not available at LITBANGKES or within the Ministry of Health. Provincial institutions also have more immediate access to communities and districts in which field research must be done. The above objective, therefore, remains important.

4.5. Health Planning Sub-Project

4.5.1. Planning for Manpower

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4.5.1.a. Development of Health Manpower Planning Unit

The Long-Term (20 year) Health Plan, recently approved by the Ministry of Health, identifies, among five priority areas, that of Health Manpower Development. The sub-project contributes to this goal through the provision of technical expertise that will shortly lead to the establishment of a Health Manpower Planning (HMP) Unit within the Bureau of Planning, M.O.H., following approval of the Administrative Reform proposed in March 1982. This unit, one of six making up the Bureau, will assume central responsibility for manpower planning and will operate in tripartite liason with the Center for Education and Training (PUSDIKLAT) and the Bureau of Personnel.

Specifically, the project's technical consultant activities have included:

- assistance in defining functions of HMP Unit (completed March 1982).
- beginning in April, 1982, provision of both on-the-job training and monthly seminars for HMP Unit staff and also provincial staff.
- collection, collation and analysis of available information on health manpower from central and provincial sources.
- assistance in identification of three provinces (Sumatra Barat, Sulawesi Selatan, Java Tengah), selected for their religious and socio-cultural differences as regions in which provincial health manpower planning activities are being upgraded and expanded.

- provision of on-the-job training during 18 months in manpower planning methodology to Dr. Rampen, Chief-designate of HMP Unit. Rampen's recent promotion has removed him from the Bureau of Planning. Training of Dr. Darjono, newly appointed chief-designate is now in progress. Training of other members of the unit will begin after they have been appointed.

The technical assistance provided appears to have been effective, as evidenced by the development, by the HMP Unit, of manpower projections through the year 2000 included in the recently approved Long-Term Health Plan. Continuing technical assistance is necessary to (i) complete training of HMP Unit and provincial staff in the 3 'path finder' provinces (ii) complete and refine manpower planning methodology (iii) develop into productive relationships the association of the HMP Unit with the Center for Education and Training and the Bureau of Personnel, including construction of an interactive Health Manpower Information system. The continuing assistance needed will include expertise in health manpower planning and information systems development.

4.5.1.b. Health Manpower Planning as part of Health Planning Process

The project's advisor in health planning has provided the technical expertise needed to produce a series of planning models through which manpower demand can be estimated. The models used are based largely upon the normative or service target approach which focuses on service demands, translated into elements of manpower utilization, and the structure of the delivery system.

At this time, the use of more sophisticated planning methodologies based upon the health needs of the target populations, government priorities and available technology, do not seem appropriate. Given the heterogeneous character of the population of Indonesia, the varied geographic and socio-cultural environment and the apparent under-utilization of health centers, a greatly improved health data base is essential if more refined models, of greater accuracy in prediction, are to be justified.

A comprehensive set of data collection instruments, appropriate to the planning model selected, have been designed and are in process of review by Working Groups appointed by the Ministry of Health. The project has provided a two-day course in manpower planning to provincial health planners and three one-day courses for HMP Unit staff.

4.5.1.c. Long-Term Health Plan and Fourth Five-Year Plan

Because of the priorities set by the Ministry of Health, much consultant effort has been expended in assisting with completion of the Health Manpower predictions for the Long-Term Plan. With approval of this Plan in February 1983, efforts are now being directed to the Fourth Five-Year Plan.

Using the models described in 4.5.1.b and data collected in the 1981-82 Health Manpower Survey, numbers of personnel in three broad categories (medical professional, paramedical and non-medical support staff) were calculated through the year 2000. These were made using each of four predictive hypotheses, ranging from 'maximal' to 'worst case' assumptions. Also utilized were data on health center utilization obtained through a limited household survey. It was necessary to make wide extrapolation of these data.

Extended predictions are now being made for the Fourth Five-Year Plan. These, unlike those made for the Long-Term Plan, will extend to the individual Province level and will consider no less than 13 professional categories, 13 paramedical categories and 5 non-medical support staff categories. Thirteen working groups are undertaking data analysis and are making manpower predictions in their individual fields, according to the overall planning model.

The project consultant will continue to reinforce the capability of provincial health planners. While a small subdivision dedicated to health manpower planning already exists at each provincial level, capabilities are limited and need to be reinforced by training and assistance available from the HMP Unit of the Bureau of Planning.

4.5.1.d. Health Manpower Planning Methodology for the Fourth Five-Year Plan

Following completion of the health manpower input to the Long Range Health Plan, in September 1982, a start was made by the Bureau of Planning on the more detailed analyses required for the Fourth Five-Year Plan.

The data to be presented in this Plan differed from those prepared for the Long Range Health Plan in two particulars: (1) the categories of medical professionals, paraprofessionals and non-professionals were to be expanded from three to thirty-one, and (ii) data, disaggregated at the provincial level were to be provided.

To accomplish this the project consultants contributed:

- o a series of manpower planning models that would permit the thirteen working groups charged with particular manpower categories to accomplish their purpose.
- o assistance to the working groups to manipulate their data in order to generate the necessary predictions of demand and supply.
- o a handbook for use by the working groups that described the step-by-step sequences to be followed in order to attain the degree of refinement needed for the plan.
- o a series of training programs for provincial planners that instructed them in the use of the models and the employment of the handbook.

The models were employed to predict target staffing levels for health workers within the Ministry of Health and also in provincial services and the private sector, utilizing four different health policy assumptions. The calculations were made in increments corresponding with the successive Five-Year Plan periods, with equalization of demand and supply by the year 2000.

Prior to this, in most categories demand exceeded supply. As a result rational methodologies were proposed by which the implementation of programs could be delayed selectively in order to adjust the imbalances.

Development of the Health Manpower contribution to the Fourth Five-Year Plan is to take place in three stages:

Stage I. January to March 1983.
Each province prepares draft plan taking into account L.T.H.P., national priorities, characteristics of provinces and their health problems.

Stage II. April to June 1983.
Bureau of Planning reviews draft plans and provincial governments make the necessary adjustments.

Stage III. July to September 1983.
Revised plans aggregated centrally and incorporated into Fourth Five-Year Plan.

4.5.2. Staff Utilization

The principal output of this component of the sub-project was to have resolved the problems created by uncertainties of staff members, administrators and supervisors concerning their responsibilities, duties and authority. Definition, through construction of current, lucid job-descriptions was to have resolved these uncertainties constructively within the original life-of-project.

In this way, the development of staffing norms for the health care delivery system and the facilities that it comprises would be rationalized, thereby enabling manpower needs to be determined accurately and the output of training institutions to be adjusted appropriately. The whole process would lend itself to costing exercises and to the application of cost-effectiveness studies as a vehicle for maximizing the kinds and extent of services, at the same time minimizing costs.

According to the work plan, initial steps for completion of a paper describing methodology to be employed were to have been completed by December 1982. Through use of a handbook, field tested in selected 'path-finder' provinces, revisions of job-designations according to a new format, useful for the purposes stated above would have begun in late 1983.

However, the majority of the activities programmed are experiencing a delay of approximately one year attributable to two reasons:

(i) the Bureau of Personnel has accumulated a back log of unresolved personnel actions that must take precedence over new activities.

(ii) the Long-Range Development Plan has preempted available technical resources including the project consultants. On the other hand, development of the Fourth Five-Year Plan with its emphasis on detailed human resource planning at the provincial level is acting as a stimulus to the development of local expertise subsequently available for job-description development and analysis.

A number of activities that are contributing to the objective have been accomplished successfully:
- in May and June of 1982, the Director of the Bureau of Personnel, Dr. Burhanuddin, accompanied by the Director of the Bureau of Planning, the Director of the Inspectorate of Personnel and Project staff consultants visited health planning agencies in Thailand, England,

Norway and the U.S. Among the objectives accomplished by these visits, the importance of accurate job-descriptions as instruments basic to health manpower planning and management was recognized.

- a paper on the development of staffing norms utilizing job-descriptions was produced on schedule (December 1982) by the project consultant on health manpower planning.

The activities described in the Work Plan for Staff Utilization appear feasible within a time frame extended by one year, so that actions, including those related to issue of the final version of the handbook for national use could be completed by September 1984.

Arrangements for the assignment of a project consultant have been finalized, during the visit of the Evaluation Team, with the Director of Personnel. Startup activities include the organization of workshops on producing job-descriptions and are scheduled to begin in May 1983.

Although the way now seems clear for the timely development of this sub-project component, both from the point of view of those involved in the Ministry of Health and in the Bureau of Personnel in particular, as well of the project consultants, it is recommended that USAID monitors the development of this project with particular attention to the critical startup activities due to take place during the next 6 months. Review at the provincial level at several stages during the development of the job-descriptions process (of which the manual is an important part) is essential.

Ultimately, the entire health manpower superstructure of demand and supply will depend on the successful, continuing implementation of the job-description process. It is hard to overemphasize the necessity to focus all appropriate resources to this end at this critical moment.

4.5.3. Center for Education and Training (PUSDIKLAT)

Legislation in the early 1960's defined the production, qualification and activities of health workers; those receiving university degrees being the responsibility of the Ministry of Education & Culture, and other health workers, of the Ministry of Health.

In 1975 the Center for Education and Training became the regulatory institution for all activities related to the coordination of training and education throughout the Republic of Indonesia. This involves the production of some 58,000

health workers each year (including post-graduate education of physicians) in 9 major allied health and nursing areas undertaken in some 400 public sector and private institutions located in 27 provinces.

Education of health workers includes training at the primary level (midwifery and nursing, environmental health, nutrition, dental health and pharmacy), at the intermediate level (teachers in nursing and midwifery for workers at the primary level) and at the semi-academic level through academies devoted to the production of particular catagories of allied health worker (e.g. health inspectors, physiotherapists, medical laboratory technologists, nurses, nutritionists etc).

The production of this large number of personnel, development of standards and curricula based on task analyses and methodologies for determination of program outputs for predictive and planning purposes, are among the complex responsibilities of the Center.

In summary, it may be said that the Center's main role is the production of the manpower needed for employment in the health sector with focus upon management, administration, coordination, planning and the provision of the technical assistance needed at both central and provincial levels. The training of planners and managers and their teachers will therefore make an important contribution to the efforts for improvement of effectiveness and efficiency of the entire health care delivery system.

To assist the Ministry of Health, the Health Training Research and Development Project is providing consultative service to the Center for Training and Education in order to achieve the following goals:

(1) Improved linkages relating manpower demand, supply and management, and creation of a more comprehensive and effective health manpower planning capacity.
(2) Improved methodology for forecasting training program outputs, taking into account other dimensions in addition to assessment of numerical inputs only.
(3) Installed capacity to construct job descriptions as a basis of selection, placement and evaluation of personnel as well as for construction of task-oriented curricula.
(4) Capacity to provide specialized training and technical assistance to planning offices of Provinces and Directorates General in accordance with needs identified by studies of actual problems and local situations.

4.5.3.a. Development of Planning and Training Capacities

Review of the consultants approved work plan and comparison of activities accomplished with those scheduled reveal that the programs have been subject to delay attributable to two principal causes:

- the efforts of PUSDIKLAT staff have been preempted by the preparation of the Long-Term Health Development plan and subsequently by the Fourth Five Year Development Plan.
- the sequence of project development was interrupted because KOBA/MSH consultant Lioni resigned in April 1981 and the position was filled in September 1981 by Dr. Rolf Lynton.

In September 1981 a project office was established in PUSDIKLAT and a counterpart working group was appointed to expedite program development. This working group included the head of the Program Planning Division, three representatives from other Divisions of PUSDIKLAT and the Director of one of the 8 provincial health academies.

A one-week workshop that included representatives of PUSDIKLAT as well as those from the Bureau of Planning and Provincial Planning Offices considered aspects of health manpower planning in relation to the Long-Term Health Development Plan and review of the current manpower situation.

A plan was developed for a visit to health manpower planning activities in Thailand, Norway, UK and the USA. The participants were the Chief of PUSDIKLAT, the Chief of the Bureaus of Planning and Personnel and the Director of the Inspectorate of Personnel. The KOBA/MSH consultants conducted the tours in England and the USA in May and June 1981.

This event eventually made an important contribution to the general development of manpower planning and production since it afforded the Indonesia participants an opportunity to experience the interaction of various contributions to the manpower planning process and to review their observations as they applied in the Indonesia context.

The Evaluation Team has experienced some difficulty in quantifying the HMDM projects' contribution to the work of the Center for Education and Training (a) because of the complex and sometimes unclear relationships of PUSDIKLAT, FKP, the Johns Hopkins University Project, the Bureaus of Planning and Personnel, and activities at the Provincial and Kabupaten levels and (b) because the reporting format utilized by the Project's consultants does not relate clearly activities

accomplished, those in progress and those not yet begun, with the objectives to which they apply.

It is therefore recommended that a standardized reporting format be developed and utilized by LT and ST consultants in their monthly and final reports, also by KOBA/MSH as a means of summarizing activities.

This format would be based upon the approved work plan and would analyse the KOBA/MSH Action and Outputs in Support of Short-Term Goals into constituent objectives. These objectives would be addressed by a series of methodologies, with accompanying indicators of progress and achievement.

It is not proposed that this format would entirely replace narrative. However, narrative could be reduced and restricted to explanations of changes in objectives, methodologies and notes.

Use of chronograms to compare anticipated actions with those in progress and completed also provides a convenient overview of progress.

While it is possible that sophisticated management techniques such as the use of PERT could be utilized appropriately, it is not recommended because of the considerable bureaucratic overhead that its use implies. On the other hand, relatively simple book-keeping techniques such as those suggested add little or may even reduce the reporting effort.

It is also recommended that USAID develops a file for each project consultant that would include:

(i) copy of Curriculum vitae

(ii) work scope for Consultant Service

(iii) work plans

(iv) monthly reports according to proposed management-by-objectives format

(v) copies of manuals, position papers, analyses and other documentation prepared as output from the consultancy

(vi) other documents relevent to task performance and its evaluation (e.g., summary records of periods of leave, travel, sickness etc.)

4.5.3.b. PUSDIKLAT Staff Development

PUSDIKLAT's capacity to collect and analyse data and to utilize it in order to forecast training outputs is in process of development, assisted by project consultants.

- in collaboration with the Bureau of Personnel and other senior Ministry of Health personnel including provincial staff, two seminars were held in March 1981 - one entitled 'Methods of Manpower Planning' at the National Health Conference and a second entitled 'Manpower Planning in the Long-Term Health Plan'.
- a series of analytical tools and pro-formas were developed and used in the preparation of the LTHP (see Section).

- preparation of the Fourth Five-Year Plan is advancing. This requires major inputs from provincial planners, with PUSDIKLAT and other assistance in order to make forecasts at the provincial level in the degree of detail called for in the Plan.

- a manual for use by PUSDIKLAT staff and provincial planners is in an advanced stage of preparation.
- the training of PUSDIKLAT staff continues. While it was anticipated that this would be completed by September 1983, it now appear that April 1984 is a more realistic date. Staff will be trained in association with the preparation of the Ministry of Health's annual plan - an activity that will await completion of the Fourth Five-Year Plan.

4.5.3.c. Manual for Preparation of Job Descriptions

The need and importance of job descriptions as a basis for curriculum development and personnel management has been discussed in section 4.5.2 of this evaluation report. For the reasons stated in that section activities have experienced delays. A working group to develop methodology for using job descriptions as a basis for the design of training programs was intended to have developed a working paper by December 1982.

With assistance from the project consultant it is now anticipated that the group will have completed their activities by December 1983. It does not now appear likely that LITBANGKES will become involved in these activities as originally contemplated.

A consultant in Task Analysis and Job Description will begin work in May 1983 and will assist the training staffs of central and regional Centers for Training and Education and planners in the "pathfinder" provinces to develop the necessary techniques.

4.5.3.d. Evaluation of Project Plans and Progress

In 1975, the Center for Education and Training, by Ministerial decree, was made responsible for all activities in the field of education and training for personnel employed by the Ministry of Health with the exception of university-level programs. In practice the Center has experienced problems in carrying out its mandate effectively:

- although the Chief of the Center is directly responsible to the Minister of Health, the Center does not have official representation at the provincial level. It is probable that the Center will be accorded status equivalent to that of a Directorate General which will carry with it the necessary representation and authority at the provincial level.

- the Center has insufficient staff and facilities to perform its supervisory and coordinating tasks adequately. Training and consultant services provided by the Health Manpower Planning and Management Project, the University of Jakarta School of Public Health, Litbankes and other institutions are attempting to improve the knowledge and competence of the Center's staff.

- Although the Center has responsibility for over 350 health schools and academies, the quality of instruction and levels of managerial competence is variable, with the result that there is, at present, limited capacity at the local level to implement effectively the policies and directives of the Center.

Given these problems, the Health Manpower Planning and Management Project proposes a program to take place at the Center for Training and Education and in the 4 "path finder" provinces for the purposes of upgrading consultant skills, developing the capacity to conduct case studies as instructional instruments and conducting task analysis as a basis for the development of job descriptions.

These purposes will be accomplished through a series of workshops and consultancies, the basic design of which has three components:

1. A 6-months consultant in each 'path finder' Province will:

   - work with trainer team (from July-August 1982 Trainers of trainers program)

- provide continuity and maintenance for technical inputs

- consult on management training development.

2. Technical inputs through short-term consultants:

   Case Development (both research/writing and also teaching)
   Consulting Skills
   Task Analysis Training

3. Same technical inputs and continuing consulting so that PUSDIKLAT can maintain and service these developments, organize itself, and expand to other Provinces.

   Practically this approach will result in:
   10 staff development programs in each Province and at PUSDIKLAT with a total of 40 programs for up to 48 participants in each location (some individuals may participate in more than one track).

The following table shows proposed program of seminars and workshops to be conducted through September 1983 at 5 locations (central and provincial).

Seminar and Workshops with PUSDIKLAT
July 1982 to September 1983

	LOCATION				
A. In Consulting Role	Jakarta	Jawa T.	Sulawesi S.	Sumbar	Jawa B.
1. Training of Trainers (LTC) (for Kabupaten Admin)					
1. July 28-August 15, 1982	6	6	6	6	6
2. March-3 weeks	30				
3. TBA	30				
2. Kabupaten Admin. (Prov.STCs)					
4. Feb. 25-March 18					
5. March 15-28 Phase I		35	24		
7. TBA Phase II		35			
8. July 18-August 6, 1983			24		
9. TBA			24		
10. TBA				24	
11. TBA				24	
3. Integrated Puskesmas Training (Prov. STCs)					
12. TBA (July-Sept)			X		
B. In Trainer Role (at least initially)					
1. Case Development (Tech. STC + Prov. STC)					

	Jakarta	Jawa T.	Sulawesi S	Sumbar	Jawa
Case Research and Writing					
1. Jan. 6 - 8 (A)	3	3	1	1	
2-3. TBA (B+C)	3	3	1	1	
4. Jan. 20 - 22 (A)	3	3			
5-7. TBA (A,B,C)		12			
8. April 14-20 (A+B) or 21-28 (A+B)				20	
9. TBA (A+B)				12	
10. TBA (A+B)					12
Case Teaching					
(Tech. STC + Prov. STCs)					
11. Jan. 31-Feb. 2 (A)	6	3			
12-13. TBA (B+C)	6	3			
14-16. TBA (A+B+C)		12			
17. July 4 - 6 (A)			12		
18. Aug. 11 - 13 (B)			12		
19-20. TBA				12	
21-22. TBA					12
2. Consultation Skills					
(Tech. STC + Pro. STCs)					
23. Jan. 13-15 A	10	4			
24. April 7-9 B	5	2			
25. July C	10	4			
26. June 27-29 A			24		
27. Aug. 4-6 B			24		
28. Sept. 5-7 C			24		
29-31. TBA (A+B+C)		24			
32-34. TBA (A+B+C)				24	
3. Task Analysis Training					
(Tech. STCs + Prov. STCs)					
35. May 11 Seminar	12				
36. May 16-30 (A)				12	
37-38. TBA (B+C)				12	

A, B, C are successive phases of series.
TBA = to be arranged.
Numbers represent participants.

4.5.4. Personnel Administration and Staff Career Development.

Reference has been made in Section 4.5.2 of this report to the problems confronting the Bureau of Personnel and to the delays that these problems have created in the implementation of new projects designed to improve the ability of the Bureau to manage effectively the large body of personnel that comprise the Ministry of Health work force.

The capacity of the Bureau of Planning to accomplish health manpower planning has expanded, largely through the exercises demanded by the Long Term Health Development Plan & by the Fourth Five-Year Plan. For similar reasons, the Center for Training and Education is taking on an expanded role in managing the multiplicity of training institutions for which it is responsible through increasingly decentralized control and monitoring.

The Bureau of Planning is largely concerned with determination of manpower "demand" based upon considerations of expanded coverage and improvement in existing health services. The Center for Training & Education in principally concerned with aspects of manpower "supply" based upon adjustments to the character, numbers & inputs to training programs.

As a result it has become evident that there is a third variable in the 'demand-supply' equilibrium - that relating to personnel management in which aspects of recruitment, retention, career development, import/export of manpower, productivity, efficiency and job satisfaction must be taken into account.

These activities are among those of concern to the Bureau of Personnel - to address them effectively and within a relatively brief response time, the fundamental ingredient, information, is indispensible.

It is for this reason that a Comprehensive Manpower Information System (C.M.I.S.) was included in the project to forge the essential links joining 'demand', "supply" and "management" or in other words the Bureau of Planning, the Center for Training & Education & the Bureau of Personnel.

The Evaluation Team endorses the thinking that included the C.M.I.S. as an integral part of manpower planning and development and supports the use of the system to analyse career patterns and to constitute & test models of alternative management policies.

The attached table, adapted from the Health Manpower Planning and Management Work Plan summarizes the steps to be taken and the support needed by the project consultants. Present status and activities, rescheduled where necessary, are indicated.

The obstacles that previously retarded progress appear largely to have been overcome and progress can be expected to be in accordance with the revised schedule, following return of the consultant (Shipp) in May 1983.

The Evaluation Team recommends the following positive actions in order to expedite this key project.

- o approval of revised schedule
- o extension of project consultants accordingly
- o close monitoring of progress, early identification of new and unanticipated bottlenecks and availability of additional resources including short-term technical assistance if necessary.
- o convening of meetings or informal workshops additional to those in the revised work plan if signs of breakdown of information transfer is detected or suspected. It is of the greatest importace that each of the three interested parties are in free communication with the others at all stages of development of the C.M.I.S.

PERSONNEL ADMINISTRATION AND STAFF CAREER DEVELOPMENT

MOH ACTIONS	PROJECT OUTPUTS TO SUPPORT MOH ACTION	PROJECT CONSULTANT	STATUS MARCH 1983	SCHEDULED FOR COMPLETION PLANNED FEBRUARY 1981	SCHEDULED FOR COMPLETION REVISED MARCH 1983	NOTES
1. Analyses career patterns of all current health manpower from a national perspective.	1.1 Design careers analysis and test on selected groups of staff.	Shipp	In progress	September 1982	September 1983	
	1.2 Organize workshop on career management using the results of 1 as examples.	Shipp	Depends on 1.1	January 1983	January 1984	
	1.3 Advise and support on the first set of analyses covering all staff groups.	Shipp	Depends on 1.1	March 1983	September 1984	Original time estimated 6/12. Revised 12/12.
2. Project the consequences of alternative career management policy for all health manpower from a national perspective.	2.1 Develop career projection model.	Shipp	In progress	September 1982	September 1983	3 documents prepa
	2.2 Test out model on selected groups of staff.	Shipp	Depends on 2.1	October 1982	March 1984	
	2.3 Advise on and support extension to all groups of staff.	Shipp	Depends on 2.2	Start January 1983	Start September'83	
3. Evaluate the consequences of alternatives career management policies and propose new policies at the national level.	3.1 Devise framework for evaluating the consequences of career management policies.	Shipp	In progress	March 1983	September 1983	Policy document prepared. March'8
4. Analyse career patterns of current staff in up to 3 "path-finder" provinces.	4.1 Perform career analysis for selected groups of staff in each "path-finder" province in conjunction with staff from Bureau of Planning.	Shipp	Start Sept.'83	April 1983	December 1983	
	4.2 In conjunction with Bureau of Planning staff organize workshop on career management for staff in both "path-finder" provinces and other provinces using results of 4.1 as examples/ illustrations.	Shipp	Depends on 4.1	September 1983	September 1983	
5. Prepare procedural manual organize workshops and formulate action plan for implementation in remaining provinces.	5.1 Assist in preparation of procedures manual.	Shipp	Depends on 4.1	August 1983	September 1984	
6. Establish draft list of data items to be collected and stored.	6.1 Produce paper which lists possible data items and their uses.	Dorsby	Accomplished	June 1983	November 1982	Health Management Information System in development. Data items will be incorporated subsequently.
	6.2 Advise during selection of draft list.					
7. Organize workshop for staff from all provinces.	7.1 Advise on the design and support the preparation of the workshop.	Boussalis	Accomplished	August 1983	November 1982	
	7.2 Provide staff support at the workshop. (Item 1.2 above).					
8. Produce procedure manual for the central unit to provide required outputs for other parts of the Bureau of Personnel and for Provinces.	8.1 Advise on output for other parts of the Bureau of Personnel and for Provinces.	Shipp	On schedule	September 1983	September 1983	
	8.2 Prepare a draft procedure manual.					

MANPOWER INFORMATION DATA COLLECTION, ANALYSIS & USE
COMPREHENSIVE MANPOWER INFORMATION SYSTEM

MOH ACTIONS	PROJECT OUTPUTS TO SUPPORT MOH ACTION	PROJECT CONSULTANT	STATUS MARCH 1983	SCHEDULED FOR COMPLETION		NOTES
				PLANNED FEBRUARY 1981	REVISED MARCH 1983	
.1 Collect official policy statement. Use policies in analysis and projection to test their effects on service future. Devise and test alternative policies.	1.1 Support in analysis and projections to test alternative policies.	Hornby Lynton	Completed 8/82	August 1982		
.2 Undertake investigation or job related decisions and their information requirements at operational units in the center and in provinces preferably using PUSKESMAS for study.	1.2 Devise conceptual framework, formulate research policies and identify analysis requirements.	Hornby Shipp	Completed 10/82	October 1982		PUSKESMAS Utility Study. Career Information requirements. (paper)
.1 Select provinces: - train provincial staff - introduce information system - provide analysis and feedback on manpower information to province and central staff.	2.1.1 Provide support material on manpower data collection analysis and use.	Hornby Lynton Shipp (Rouselle)	Completed	November 1982		Provincial survey. Started Dec. '81 Completed March '83
	2.1.2 Assist in formulating specific information needs and outline information system alternatives.		In progress	April 1983		Provincial start training in progres
	2.1.3 Staff support on data analysis.		Completed	August 1983		
.2 Convene workshop to evaluate results and select overall manpower information network. Draw up plan for implementation.	2.2 Develop technical analysis procedures.	Hornby Shipp	Completed	October 1982		Manpower situation analysis on staff in M.O.H. and outside completed.

4.5.5. Comprehensive Manpower Information System

The Project Paper, in December 1977 emphasized the need for improvement in health planning capacity at the national and provincial levels. While underlining the role of skilled planners, it drew attention to the importance of health information relating to the pattern of disease and the need for management information including productivity and costs.

As the project evolved, the manpower element of health planning became progressively predominant and the concept of a Comprehensive Manpower Information System, designed to relate 'demand', 'supply' and 'management' evolved.

In recent months, under the stimulus of the Director of the Bureau of Planning, MOH interest has become renewed in a comprehensive Health Information System designed to serve the majority of the MOH central and provincial information needs -- a concept that has been in existance for several years but untranslated into action.

As conceived by the MOH, the Health Information System would comprise four subsystems:

- Management Information System
- Operational Information System
- Scientific and Technical Information System
- Health Education for the Public Information System

In view of the MOH's interest in the Health Information System, it is useful to examine its relationship to the Comprehensive Manpower Information System (C.M.I.S.).

The Management Information System, one of the four subsystems, is seen to contain a series of lower order components including health statistics, health center data (the Puskesmas Information System) and data related to manpower, that now may be entitled the Comprehensive Manpower Information System. (see figure). Priorities in the Bureau of Planning have been identified as the C.M.I.S. and the Puskesmas Information System.

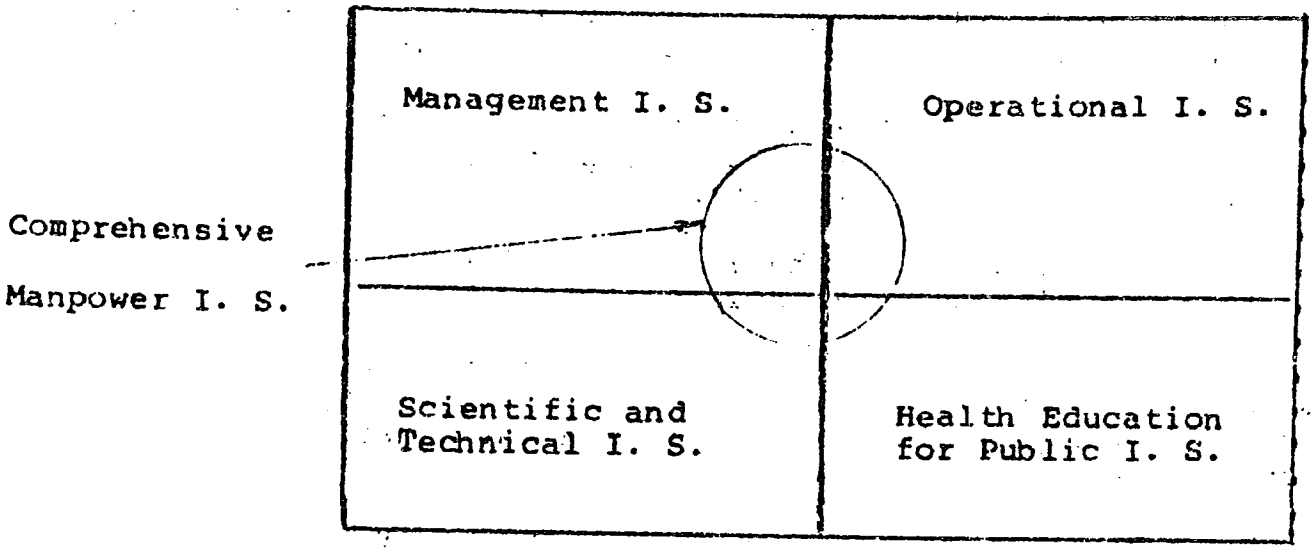
The relationships are important in order to visualize the role of the Project Information System consultant (Pouselle), who, at the request of the Director of Planning is undertaking two related but different tasks:

(i) assistance with the detailed development of the C.M.I.S. as contemplated in the project work plan.

(ii) assistance with construction of guidelines and definition of fields that will become the MOH Health Information System. This activity is not described in the Project Work Plan.

While all activities related to the Health Information System and the C.M.I.S. have been subjected to delays owing to priorities of the LTH and R4 plans, a variety of activities have been in progress that contribute to the complex constitution of the C.M.I.S.

Health Information System



Relationship of the Comprehensive Manpower Information System to the Health Information System and its sub-sets

These activities are summarized in the attached chart, extracted from the Project Work Plan and expanded to show accomplishment and rescheduling. Activities at both the central and provincial levels (workshops, training, consultants -- listed elsewhere in this Report) are increasing the volume of data flowing into the Bureau of Planning.

Two principal activities need to be addressed:

(i) Expansion of data base at provincial level -- now limited in quality and coverage

(ii) Development of the integrated information system for analysis and utilization of data.

Data for the C.M.I.S. has three major sources of origin - 'demand' determined through Bureau of Planning; 'supply', determined through PUSDIKLAT and 'management', determined through Bureau of Personnel.

The C.M.I.S., as a comprehensive whole, may be seen to compare three functional areas:

(i) Data input
(ii) Data manipulation, analysis and intepretation
(iii) Utilization of information for planning, deployment of personnel, etc.

The interaction of the Sources of Origin of Data and the Information System may be visualized as a 3x3 matrix. If present levels of quality are recorded as - to 4+ (nil to optimal) the present status of the C.M.I.S. may be represented as follows:

C.M.I.S.

SOURCE	COLLECTION	ANALYSIS	UTILIZATION
Demand (B. Planning)	++	+	±
Supply (PUSDIKLAT)	++	+	+
Management (B. Personnel)	++	+	+

In summary, the relationshp of the C.M.I.S. to the Health Information System has been verified, the need to contemplate a revised, more comprehensive role of the project consultants has been raised and the status of the C.M.I.S. has been defined.

Additional technical assistance should be provided by the Project to aid the working group charged with development of the Management Information System and to assess additional needs in light of the capabilities of the newly created Center for Data Processing and the priorities indicated by the Fourth Five-Year Plan.

4.6. Alternatives For The Use Of Funds In An Extended Project In Health Planning, Manpower Development and Research.

As a general principle, the evaluation team suggests that future funds under this project should focus, mainly or in toto, on field activities, be they related to health planning, training or research. Moreover that, as far as possible, the three fields become components of every project to be developed in selected geographic areas.

The following alternatives for the use of the funds are recommended for consideration. They are not mutually exclusive; on the contrary they may be implemented simultaneously.

A. Developing a systematic health planning process at one or more kabupatens.

The Government of Indonesia has made very significant progress in the field of health planning. This process at the Central level has resulted in a series of basic documents, among them: The National Health System and the Long-Term Health Development Plan up to the year 2000; The Broad Programmes for the LTHP; Guidelines for Health Repelita IV. All of them are essential for the planning process at the provincial level.

On the other hand, the availability of information for health planning has clearly improved, especially with regard to disease patterns, provision of health services, manpower, physical facilities and financial resources.

The training in health planning has also made significant strides both at the Central and Provincial levels.

Intrasectoral and intersectoral coordination has also made progress, particularly among the various Divisions of the Ministry of Health and in the provinces, among the department of Health and BAPPEDA.

Of major importance is the decision to decentralize the planning process to the Provinces for Repelita IV and is clearly supported by the Guidelines provided by Bappenas. A definite trend in this direction is perceived.

Enormous advances have been made in the provision of health facilities. Thus, the number of Health Centers and Subcenters has increased from 3,133 in 1975 to 13,139 in 1981. In the same period, the number of doctors, nurses, and midwives has grown from 6,221, 7,736, and 8,323, respectively to 11,861, 17,084, and 15,770. However, the impression remains that coverage in health care has not increased proportionally, showing a serious underutilization of available resources. The determinants of this situation should be investigated in different regions of the country.

Taking as a whole, this commendable effort in health planning has developed, from the MOH to the Provinces, a natural process. However, the moment seems appropriate to implement systematic health planning, on a trial basis, at the kabupaten level. Hence, this proposal aims to use, with maximum effectiveness, available human resources, funds and facilities to reach preestablished objectives within the frame work of primary health care. The emphasis is on maximizing the outputs of available resources in the kabupaten selected, including its kecamatans, mobile clinics and village health workers.

Criteria for the selection of kabupaten(s) should be established, but a general characteristic should be the existence of health units with average basic health resources.

On the basis of available information, the process should identify major health problems and an order of priority. Objectives should then be established for each priority area commensurate with available resources. Techniques and procedures to reach them should be specified. It is highly likely that infant and early childhood mortality, low birth weight, enteric and respiratory infections, malnutrition, prevalent communicable diseases susceptible to immunizations, will be included. Monitoring and evaluation of processes and outcomes should also be part of the kabupaten health plan.

The developing of the planning process -- with the assistance of consultants if needed -- should serve as in-service training for the local staff. Communities should actively participate in the identification of problems, the selection of priorities and the implementation of activities to reach objectives.

The model employed should be as simple as possible. Research should be the tool to improve the allocation, productivity and cost-effectiveness of resources in terms of objectives. It is also essential to explore issues related to low demand of services and low utilization of human resources as well as other problems of significance to make the plan's implementation and evaluation increasingly efficient.

The outcomes of this alternative in the investment of AID resources are evident:

1. It will show what major health problems can be significantly reduced in a relatively short period of time with existing resources applied in a systematic way.

2. It will also demonstrate whether the low demand for services can be increased by a more effective and efficient supply of services and with active community motivation and participation.

3. It will establish concrete bases for increasing resources commensurate with increasing demand.

4. It will be useful for in-service training for the staff of the kabupaten/kecamatans involved and neighbouring ones.

5. It will provide a model for adaption and implementation in other Provinces.

6. It will show the essential role of research for increasing the effectiveness of resources and serve as a ground for biomedical investigations for specific priority problems leading to assaying modern procedures for rapid diagnosis, and the prevention and treatment of diseases of high incidence. In sum, it will serve as a field research laboratory for studies of health services and manpower development, two priorities in research.

7. The kabupatens selected could well serve for the implementation of the proposal for establishing Primary Health Care (PHC) Development Centers for services, training and research.

A.1. Suggested USAID Strategy in support of Indonesia Policies and Priorities in Health Development

During the last week of the evaluation team's activities, Dr. David Korten prepared the report under the above title. The pertinent parts are included in Annex 5.6.

The strategy proposed to AID is based on several statements in the National Health System document of the Ministry of Health and his discussions with Drs. Hapsara and Soebekti.

It could be safely stated that the main thrust of the Korten report is coincidental or, at least, complementary with Alternative A just described. In both, the need for decentralizing the health system to the provinces and the kabupatens for responding effectively to local specific problems, socioeconomic conditions and cultural traits, is emphasized.

While Alternative A describes a systematic planning process using available resources and active community participation, the Korten strategy goes further in suggesting specific ways -- called basic elements -- actually to implement the plan and its programs.

The strategy emphasizes the need to strengthen resource institutions, such as the provincial schools of medicine and the school of public health, to assist in the planning process and to benefit the organization of professional education on the basis of actual field experience. It also recommends workshops as an efficient mechanism for "mutual learning, problem solving, and planning," at different levels of the health system.

Should USAID decide to support Alternative A with funds from the HTRD project, it would be highly advisable to complement it with the strategy recommended in the Korten report.

A.2. Suggested Research Areas for Improving Health Planning, Manpower Development, Management and Delivery of Services

Concentrating research in communities within selected kabupatens as detailed in Alternative A for an extended HTRD project, should have great significance for improving the health status of the underserved human beings in Indonesia through more cost-effective health services. It would also provide a data base more near reality that will certainly better the methodology for projecting manpower in the Long-Term Health Plan and for formulating programs in Repelita IV.

Specific research areas should come from the mapping excercise at the Institute for Health Services Research at Surabaya and the client-oriented research epidemiological seminars.

(i) It is to be expected that studies on the nature and dynamics of diseases in order to establish priorities will be included.

(ii) On the bases of job descriptions, task analyses of different categories of personnel and staff utilization (time and movement) studies will also be developed. Using this information, a series of alternative health care delivery models can be constructed and examined.

These models will include grouping of tasks in ways that may imply new, more efficient methods for utilizing existing categories of health personnel and can form the basis for defining the tasks to be performed by entirely new categories.

(iii) The rate of demand of services and ways and means to motivate the community is another important area.

(iv) Periodic surveys or the use of a continuing sample for registering a data base of demographic, vital and health statistics as well as available resources for health care services seems essential.

(v) Studies on cost-effectiveness of different combinations of resources and/or diverse methodologies for a particular problem should also be developed.

(vi) Research in the trial of new methods for rapid diagnosis of current diseases, as well as for their prevention or cure becomes another area of interest.

(vii) Studies on health and nutrition education methodologies should also be included, because of their great potential impact.

(viii) Improving intrasectoral and intersectoral coordination at the kabupaten and kacamatan levels is another important research objective, particularly in rural areas.

(ix) Strengthening the health infrastructure through better management involves investigations that should be pursued.

(x) Studies should be conducted on alternative methodologies for: Health Planning
Monitoring and Evaluation

(xi) Appendix 5.5 "Proposal for Establishment of a Network of Field Research Areas", prepared by Dr. Carl E. Taylor is included. It contains the rationale and the mechanism for developing community-based health services research resulting from a partnership between a local academic research oriented institution -- such as a University -- and the provincial health services. The evaluation team endorses this proposal.

B. To develop further the assistance on health manpower planning, training and personnel management.

Results of this Sub-project are stated elsewhere in this report. Significant outcomes are clearly identified. They include the organization of the manpower planning unit in the Bureau of Health Planning in the MOH; the estimations of the human resources needs for the Long-Term Health Plan up to the year 2000; the more detailed predictions for the formulation of the Five Year Plan (Repelita IV); the organization of "training the trainers" programs in three provinces.

The proposed activities related to personnel management, including the development of job descriptions as a basic tool, and to the construction of a comprehensive Health Manpower Information Management System have experienced major delays of approximately one year, although starts have been made. The evaluation team recognizes the key role of these activities and supports their continuation at greatly increased pace.

Three needs seem apparent in developing further the manpower planning process:

a. To strengthen the unit at the Bureau of Planning so that it becomes self-sufficient in order to develop its central responsibilities and provide advisory services to the Provincial sections;

b. To reinforce the capability of the Provincial health planning departments in the area of human resources;

c. To strengthen the interrelations of the Bureau of Planning, the Center for Education and Training, and the Bureau of Personnel.

C. Improving the effectiveness of Basic Structures of the Ministry of Health.

The expressed need of support of the Departments of Planning and Personnel of the MOH may suggest that other basic structures could also benefit from a carefully designed international collaboration through AID. Mention could be made of the Departments of Finance, Statistics, Logistics and Supplies, and others. The Government of Indonesia should, of course, decide whether there is a need to improve the effectiveness of these essential units.

D. Problem-solving oriented interventions at the Kabupaten level.

In terms of infant and early childhood mortality, there is scientific evidence of the synergistic effect of the mix of programs of maternal and child health, family planning, nutrition, immunizations, basic sanitation, treatment of intercurrent diseases particularly diarrheas and respiratory conditions and health/nutrition education. The higher the rates the greater the reduction in a relatively short period of time. This alternative will attempt, with the support of AID, to program the combination of the above mentioned activities for reducing infant and early childhood mortality in a specific period of time, let us say 5 years, with the available resources at the beginning. No elaborated plans will be needed, the objective being straightforward. It will be a "quick and dirty" approach of a primary health care effort preceding a more systematic planning.

E. Control of Specific Nutritional Deficiencies through categorical programs.

Data on the nature and magnitude of malnutrition in Indonesia are limited. However, the picture which emerges suggests the presence of 4 major nutritional deficiencies: the macronutrient deficiency, (1) protein-calorie malnutrition (PCM); and the micronutrient deficiencies; (2) Vitamin A deficiency; (3) iodine deficiency; and (4) nutritional anemias. Of these, PCM is the most chronic and has the most far-reaching consequences for the welfare of the population and development of the country.

From a public health perspective, the significance of the malnutrition problem can be measured in terms of its effects on mortality and morbidity. It is true that severe forms of PCM (about 1-2% in Indonesia) contribute to high infant mortality rates. However, due to the complexity of the etiology of PCM, the problem is best addressed through community level inter-sectoral programs.

Xerophthalmia, nutritional anemias and endemic goitre, because of their contributions to mortality and morbidity among malnourished children, their wide extent, the dramatic irreversible damages (blindness and cretinism) they cause and the negative effect on work capacity, are the nutritional deficiencies which can be addressed by explicit targeted programs. Components of these programs are currently underway in Indonesia and should be continued.

Both on national and international levels there exists an advanced reservoir of information about the etiology, the treatment and the prevention of these micronutrient deficiencies. The Government of Indonesia has undertaken a variety of interventions to combat these deficiencies. However, these rather dispersed activities have lacked a coordinated strategy necessary to sustain a focused effort.

The evaluation team recommends that funds from project Indonesia 497-0273 be used to assist the Ministry of Health in planning and implementing nation-wide programs to reduce progressively the incidence of goiter, hypovitaminosis A and iron-deficiency anemia. There is no valid reason for these scourges to remain in Indonesia.

It is also recommended that a small, flexible, and discrete source of "nutrition" funds be approved. It could serve to encourage and assist the GOI in bringing together national and international specialists to analyze objectively and review past research and experience related to specific nutrition problems, make recommendations for limited new operation-research initiatives and plan for phased field and program oriented strategy for intervention implementation.

A FINAL CONSIDERATION

If priorities among these alternatives are to be established, as they most likely will, the evaluation team would like to reiterate the principle that led to their selection, namely that new funds under this Project should focus on field activities combining planning, services, training, and research at the kabupaten level. We believe that this approach will render a significant service to the Indonesian people through the Ministry of Health at a moment of very active development of the health infrastructure and human resources in the country.

4.7. Project Consultant Staff

As of January 31, 1983, approximately 88 person-months of technical assistance has been provided to the Project, through contract No. AID 497-80-100.72.

The consultants provided and those anticipated are listed and their periods of service are indicated on a chronogram. Among the activities performed and discussed elsewhere in this Evaluation Report, a list of Seminars and Workshops, at which the consultants provided assistance to their Indonesia counterparts, is included. A listing of documents developed by the MOH, with assistance of the Project's consultants is incorporated into this Report as Appendix 5.4.

Seminars & Workshops Assisted by Project Staff

ASSISTED BY	TOPIC	WHERE HELD	DATE	PARTICIPANTS
Hornby	Seminar on Research Methods/Management	F.K.M.	Oct/Nov 1982	Staff/students FKM
Shipp	Client Oriented Research	Litbangkes	Dec 1981	Senior Min. Staff
Shipp	Client Oriented Research	Litbangkes	March 1982	Puslit Chiefs
Hornby	Client Oriented Research	P4K	July 1982	P4K Staff
Solter	Puskesmas Staff Utilization	Litbangkes	March 1982	Senior Min. Staff
Rousselle/ Hornby	Management Information Systems	Litbangkes	Nov 1982	Min. Inform. Staff
Hornby	Methods of Manpower Planning	National Health Conference	March 1981	Senior Min. and Provincial Staff
Porcher	Scientific Report and Writing	Litbangkes	Oct 1981	Technical Staff
Porcher	Scientific Report and Writing	P4K	Nov 1981	Technical Staff
Solter	Technical Short Courses (7).	Litbangkes	1981-1982	Technical Staff at Litbangkes
Hornby	Manpower Planning in the long term	Puncak	March 1981	Central and Provincial planning staff
Shipp	Development of Human Resources	Puncak	Feb 1983	Senior Provincial and Central Staff
Hapsara/ Shipp	Careers for Pharmacists	P.O.M.	Jan 1983	Senior Staff P.O.M.

Long and Short Term Consultants Provided by Project to January 31, 1983

NAME	FROM	ASSIGNMENT AREA	APPROX. CONSULTANT EFFORT (PERSON - MONTHS)
LONG-TERM			
Hornby	M.S.H.	Planning	23
Solter	M.S.H.	Research	24
Lynton	KOSA	Training	16
Lioni (resigned)	KOSA	Personnel	6
SHORT-TERM			
Shipp	M.S.H.	Personnel/Planning	12
Mico	Third Party Ass. (California)	Health Education	7 1/2
Ross	San Jose State University	Health Education	5 1/2
Taylor	Johns Hopkins	Research	1 1/2
Porcher	C.D.C. (Atlanta)	Research	1
Rousselle	M.S.H.	M. Infor. Syst/Res.	1 1/2
Beery	H.S. Research Centre. Univ. N.Car.	Training	delayed because sick
H.R. Lynton	Independent Consultant	Training	2
Gant	Florida State University	Training	1
Pareek	Inst. of Management Ahmedabad	Training	1
Schaeffer	Univ. of N. Carolina	Research	1/2

EXPECTED BUT NOT YET CONFIRMED

O'Byrne	Indep. Cons. (previously Univ. Hawaii)	Training/Personnel
Lyons	Indep. Cons. (previously Univ. Hawaii)	Training/Personnel
Haddart	Indep. Cons. (Previously Wessex England Reg: Hospital Board)	M.I. System/Personnel

4.8. Relationships between the University of Indonesia School of Public Health/Johns Hopkins University Project and Indonesia Health Training, Research and Development Project.

The evaluation team has read the reports of the Indonesia University School of Public Health/Johns Hopkins University Project. Within the field of post graduate education, its objectives could be considered complementary to those of Indonesia project (497-0273). This complementarity can be clearly seen in the areas of health planning, training of provincial planners, and research. With regard to the latter, the "mapping process" -- at present being developed at the Center for Health Services Research in Surabaya -- should result in specific areas of investigation stemming from an active dialogue between providers of research information and users of it.

It can be stated that there is some duplication between the two projects in the establishing of national research priorities, which may be useful. Notwithstanding, as mentioned, actual complementarity among specific fields exists. There is, of course, room for improving coordination.

In the light of the proposals the evaluation team makes in this report, the suggestion of a functional and administrative integration between the two projects should be explored.

Appendix 5.1

Abbreviations and Acronyms

BAPPEDA	Provincial Development Planning Board
BAPPENAS	National Development Planning Board
BIRO KEPEGAWAIAN	Bureau of Personnel
BIRO PERENCANAAN	Bureau of Planning
B.K.I.A.	Balai Kesejahteraan Ibu dan Anak: Maternal-Child Health Center (Simple Outpatient clinic usually staffed by an auxiliary nurse or midwife)
B.K.K.B.N.	Badan Koordinasi Keluarga Berencana National: National Family Planning Coordinating Board
BUPATI	Head of the Kabupaten (Regency) Government
CAMAT	Head of the Sub-District Government
CHIPPS	Comprehensive Health Improvement Program-Province Specific
DEPKES	Department Kesehatan: Department of Health
DESA	Village
DINAS KESEHATAN	Office of Provincial Health Service Implementation
DOKABU	Head of the Kabupaten Government Health Service
E.P.I.	Expanded Program of Immunization
F.K.	Fakultas Kedokteran: Medical School
F.K.M.	School of Public Health
Gotong Royong	Cooperative mutual aid as traditionally practiced in Indonesia village
H.M.P.	Health Manpower Planning

KABUPATEN	Regency or District
KADER	Village Volunteer
KAKANWIL	Head of Provincial Health Services
KANWIL KESEHATAN	Office of Representative of Ministry of Health in each province
KECAMATAN	Sub-District
KOTAMADYA	Municipality, an urban center of the kabupaten headed by a Walikota, or mayor
L.A.N.	National Institute for Administration
LITBANGKES NIHRD	National Institutes of Health Research and Development
L.K.M.D.	Lembaga Ketahanan Masyarakat Desa: Village Committee
LTHP	Long-Term Health Plan
LURAH	Village Chief
PEMERATAAN	'Equalization' in distribution of Services to Provinces
PUSDIKLAT	Pusat Pendidikan dan Latihan (Center for Training and Education)
PK	Perawat Kesehatan: Primary Health Nurse
P.K.M.D.	Pembangunan Kesehatan Masyarakat Desa: Primary Health Care Model for Indonesia
POLICLINIC	Small, simple, outpatient clinic
PROKESA	Promotor Kesehatan Desa: Health Promotor at village level
PUSKESMAS	Pusat Kesehatan Masyarakat: Community Health Center, generally at kecematan level
PUSAT	Central Government Level
RAKORPIM	Ministry of Health 'cabinet' made up of various Directors General

(RE) PELITA III	Third 5 year Development, 1979-1983
(RE) PELITA IV	Fourth 5 year Development, 1984-1989
S.K.N.	System Kesehatan National - National Health System
S.P.K.	Sekolah Perawat Kesehatan: Nursing School
S.P.P.H.	Rural Sanitarian School

Appendix 5.2

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Appendix 5.3

Persons Interviewed

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Dr. Carl E. Taylor
KOBA, Consultant in Research

Appendix 5.4

Partial Listing of Health Manpower Planning Documents Prepared with Assistance from Project Consultants. March 1980 - February 1983.

Title: Looking into the Future - The Implications for Manpower

Date : March 1980

Contents: Study of Staffing Levels of 9 hospitals in Aceh. Analysed by number of staff as % of establishment.

Category	Range (%)	Average (%)
Doctors	0 - 67	35
Nurses	17 - 100	41
Paramedical	10 - 57	27
Non-Medical	0 - 54	24
All Categories	13 - 70	33
Bed Occupancy	15 - 75	53

Title: Information Requirements and Available Sources of Information for Health Manpower Planning.

Date: n.d.

Contents: Demographic data, environmental, economic characteristics.
Health needs.
Utilization of health care facilities.
Health manpower training.
Supply of health manpower.
Health manpower planning in national context.

Title: Proposed Analysis of H.M.S.R. Data.

Date: 1981

Contents: Proposed analysis of data from provinces.
17 categories of staff.
15 types of health establishment.
Data includes leave, days lost, training, sickness.
Computerized calculations over 12 month period.

Title: Determining the Current Manpower Situation: Data Collection for Long Term Health Manpower Development Plan (Gunawan and Shipp).

Date: August 1981

Contents: Current staffing situation.
Current Puskesmas workloads and manpower requirements.

Title: Looking to the Future - the Implication for Manpower.

Date: August 1981

Contents: Situation analysis. Study based on province of Aceh.
Gap between existing staff and future needs.
Problems.
Geographic distribution of 4 categories of staff.
Hospital and Puskesmas staffing.

Title: Planning for Manpower in the Programme Planning Phase of the Long Term National Health PLan.

Date: August 1981 1st Edition
December 1981 2nd Edition

Contents: Overview.
Steps in Health Manpower Planning
HMP calculations
Appendices:
1. Method of calculation of volume of work or work required.
2. Sample manpower calculation for MCH programme objective.
3. Method of calculation of manpower requirement to undertake volume of work.
4. Method of Calculation of Training required to attain manpower targets.

Title: Collecting Information on Health Pesonnel to Work Out Master Plan for Long Term Health Development Program.

Date: December 1981

Contents: Date Collection Forms I & II.
Instructions.
Data include: categories.
numbers now and at end R III.
shortages.
posts vacant.

Title: Health Manpower Situation Report

Date: February 1982

Contents: Describes current staff and staffing situation.
Identifies current manpower problems.
As of March 31, 1981, 103,000 MOH employees in 92 categories.
Average 6.8 staff/10,000 population.
Range 2.3 to 26.5

Title: Puskesmas Manpower Utlization Study

Date: March 1982

Contents: Study of staff activities in 8 Puskesmas, 4 in central Java, 4 in South Sulawesi. 4 rural.
Average findings show that staff spend
43.1 % time in non-productive activities.
16 % in direct services.
25 % in administration.
6-7 % time spent in field.

Undertake activities for which they are not trained. Job descriptions need to be clarified and standardized. Additional training courses needed.

Title: Prosedur Dan Cara Penyusunan Keperluan Tenaga Kesehatan. Untuk Menunjang Pelaksanaan Rencana Pokok Program Pembangunan Jangka Panjang Bidang Kesehatan (RP3JPK Manpower Calculations).

Date: May 1982

Contents: Objectives & Basic Strategy
Manpower requirements based on volume of activities or number of establishments.
Calculation of volume of service
Calculation of health service activities.
Summary Requirements.
Model Forms & Instructions.

Title: Analisa Penyusunan Penyediaan Tenaga Kesehatan. (Health Manpower Supply Study).

Date: June 1982

Contents: Health Manpower projections thru 2000
Current staff remaining
New graduates
New recruits
Total staff
Factors affecting future supply

Title: Case Study: Indonesia. Developments in Health Manpower Planning and Management (Hapsara).

Date: October 1982

Contents: Background & present situation
Evolution of Man Management
Manpower Planning
Training
Overall Manpower System
Milestones in the Development of Health Manpower Management.

Title: Proposed P IV Health Manpower Plan

Date: December 1982

Contents: Developmental Stages of Planning Process.
Details of steps to provide data for 25 staff categories by 13 working groups.
Outline of content of provincial plans.
a. Current staff
b. Proposed increment by category
c. Proposed increase or decrease in supply
d. Planned import/export of staff
e. Staff increases by service (MCH, hospitals, etc.)
f. Proposed increase in productivity.

Title: Health Manpower Planning for R IV

Date: February 1983

Contents: Set of Draft Documents, Tables, Forms for use by the 14 Working Groups.
Form A1 Estimated Staffing Level at end of R III.
Form B1 Estimated Staffing Level at end of R IV.
Form C1 Expected Service Coverage at end of R IV.
Form D1 Allocation to Provinces of Extra Staff Planned During R IV.

Data tables: Manpower Requirements & Supply thru 2000.

National Population Statistics 1988/9.

Forecast Province Population Statistics 1988/9.

Appendix 5.5

Proposal For Establishment Of Network Of Field Research Areas -- Dr. Carl E. Taylor

The multiple objectives of adapting primary health care and national policies to the specific needs of the various parts of Indonesia can be greatly facilitated by developing in each major region a field research area. This would provide a field laboratory for conducting specific research projects needs to fill present gaps in knowledge important for the development of health services and improvement of health status. It would provide a general data base so that each individual research project could be developed more cost/effectively rather than always having to start from the beginning in setting up field arrangements. It would provide a continuing framework to build and maintain competence in research and development. It would provide a training base for beginning research workers. It would systematize the process of consultation between health service personnel and research teams on problems in health care for which solutions are needed. It would provide a continuing mechanism for feeding information back into the services from research findings. It would permit field trials of alternative new interventions and of new patterns of manpower utilization based on a more practical process of task analysis and job description adapted to varying local conditions. It would provide a systematic base for simplifying and adapting the health information system.

In addition to these research and development functions the area could be used as a field training base for all categories of health personnel and would make it possible to take educational activities into situations where community-side teaching for the whole health team would be possible.

By using an entire kabupaten for the field research area the recurring problem of community fatigue would be avoided. With about a million population and 20 health centers there is sufficient opportunity to move projects and training activities around so that people do not resent intrusions on their time. Comparison groups can be obtained readily with an experimental group in one study serving as a control for a different kind of investigation.

The essential features of the core effort are:

1) To develop a continuing data base for routine information such as causes of death, vital rates and population denominators.

2) To provide an organizational base in which minimum services are functioning so that interventions can be introduced and tested.

To establish these components a partnership is needed between a local academic research-oriented institution and the provincial health services. Carefully selected staff from both would work part-time to maintain the core activity. Approximately 3 professionals from the university and 3 from the staff of a selected kabupaten would form the research coordination team. In addition full-time statistical staff for data gathering and analysis would maintain the data base and be available to participate in special studies. No buildings or other capital costs would be needed because existing facilities would be used. A heavy investment in local transportation would be needed.

The international consultant team would provide carefully selected expertise in developing the very special kind of field guidance needed. The primary emphasis would be on building competence in Indonesia service institutions. The two institutions that have the most expertise that can be used for local consultant are P4K in Surabaya and FKM Jakarta.

Appendix 5.6

DRAFT
March 11, 1983

To: David Calder
From: David Korten
Re: Suggested USAID strategy in support of Indonesian policies and priorities in health development

1. GOI Policies and Priorities. The GOI has developed a sound policy framework for health development in Indonesia, with particular attention to the central role of the community and the importance of public participation in defining needs, setting priorities, and planning and implementing programs responsive to these priorities. [See National Health System (translation), p. 71. Referred to subsequently as NHS.] According to the NHS (p. 80) implementation of the policy is to be based on the principles of "deconcentration, decentralization and assistance."

The rationale is clear and was called to our attention repeatedly. Dr. Hapsara, Head of the Planning Office of the Ministry of Health, stressed that Indonesia is a diverse country. Each area not only has its own distinctive health needs, it also has its own socio-cultural setting. Dr. Soebekti, Director General of Community Health, argued that approaches which work well in one area of the country may well flop in another area where the population is different. He also stressed the importance of starting with the priorities of the people in any given community, rather than those of the Ministry of Health. He noted this may often even require giving attention first to non-health related needs. The NHS (p. 32) further states that "Health efforts should be adjusted to demographic, geographic, socio-cultural and economic factors and the possibility of different developments in accordance with local conditions."

Dr. Hapsara observed that the basic national programs and strategy are in place. He now sees it being up to the provinces and kabupatans to find what will work within this framework in response to their own needs and setting. He stressed the need is now to focus on real problems in the field. He acknowledged the need for epidemiological monitoring and analysis at provincial and kabupatan levels as a basis for defining local priorities and evolving the best ways of addressing them given available resources. He also acknowledged the need for substantial decentralization to make this possible. Dr. Soebekti highlighted similar themes. He made it clear that the concepts have been formulated, but that the Ministry must now learn how to implement them though actual

doing. He stressed the need for appropriate tools of implementation that could be applied across the country while at the same time being responsive to differing local conditions. The NHS (p. 29) acknowledges that "...the organization and procedures of the system of health care applied by the central as well as regional governments and the community, are not formuated in detail yet."

There is a realization that effective local action on the nationally mandated policy of a decentralized health system responsive to local needs depends on building the requisite capabilities, especially in management. Both Drs. Hapsara and Soebekti stressed the need to strengthen management capability at provincial and kabupatan levels. So does the NHS (p. 67), which calls on central government to gradually give real autonomy and responsibility to the regional governments as they develop the requisite capability in health management.

It seems evident that a critical gap currently exists between policy commitment and operational reality. The government has defined what it wants to do in health, but at the same time feels it does not yet know how. There are no identified prototypes for the processes of local health development envisioned. It is not looking for outsiders to tell it how. It currently seeks to develop its own solutions appropriate to Indonesian realities and aspirations through its own experience. To this end it has designated a number of "pioneering" provinces in which innovative efforts are being encouraged. It remains to develop these efforts in ways which will rapidly generate learning useful on a larger scale--and the capacity to apply that learning. It is my impression from our discussions that supportive collaboration of outsiders in strengthening the learning process in which the Ministry is already engaged is welcomed--as evidence by ongoing collaboration with USAID in various areas.

2. An Appropriate Support Role for USAID.

USAID/Indonesia is well positioned by way of its present project portfolio to provide effective and responsive support to the GOI in realizing its policy commitment to development of a locally responsive, decentralized national health system. Making such support the central theme of the Mission's health program strategy over the next 10 to 15 years would also be consistent with the institutional development theme articulated in the Mission's most recent CDSS. The proposed program strategy would make clear the linkages between current and anticipated USAID supported health projects.

3. Assumptions Underlying the Proposed Strategic Framework

a. As argued by Dr. Soebekti, the tools or systems required to implement the GOI's policy must be developed out of field experience. They cannot be designed centrally out of the heads of experts.

b. Existing centrally mandated systems, procedures and working norms seriously inhibit the innovative and adaptive behaviors required at provincial and kabupatan levels. Yet people at the center are understandably reluctant to make precipitous changes in systems and procedures which might prove inappropriate, or to delegate authority without reasonable assurance that it will be used well.

c. The concept of looking to a small number of "pioneering" provinces and kabupatans is a sound response to the current priority need of the health system. A small number of these can usefully serve the larger system as learning laboratories to: 1) develop prototype methodologies and systems able to support the decentralized health programming processes envisioned in current national policy; 2) to develop the individual and institutional competence eventually required to support their introduction in other provinces and kabupatans; and 3) to illuminate needs for specific supporting changes in central systems, regulations, and management styles and allow for relatively small scale trial and adaptation before nation-wide introduction.

4. Three Basic Elements of the Strategy

Element 1: Designate one kabupatan in each of the three HTR&D project provinces (West Sumatra, Central Java, and South Sulawesi) as a learning laboratory in which intensive attention is given to development of needed prototypes. Beginning with diagnostic workshops attended by relevant officials, basic data gathering and analytical work would be carried out as a basis for determining priorities and developing program approaches responsive to the local setting and consistent with national guidelines. Operational authority would reside with kabupatan officials normally responsible for health program management at that level. Technical support would be provided under the supervision of the province so that provincial capability to extend lessons to other kabupatans is being developed coincidentally with the initial kabupatan efforts. This support would be obtained primarily though collaborative arrangements with Indonesian resource institutions such as FKM and the regional medical schools. The use of Indonesian resource institutions would be intended in part to tap their existing expertise, but even more important to facilitate their own further development as effective resources to support the expansion process as effective replicable systems are developed.

Element 2: Establish a National Community Health Development Working Group chaired by the Director General of Community Health. It would include as participants a few key individuals with a particular commitment to the decentalization effort with responsible positions in relevant units of the Ministry of Health, BAPENAS, Ministry of Budget, and the Ministry of Home Affairs. It would also include participation from participating resource institutions, USAID, and the HTR&D technical assistance contractor. This Working Group would advise on learning laboratory development, provide legitimacy for experimental activities, take steps to provide needed budgetary flexibility, and provide any other special support required. It would closely monitor activities in the learning laboratories to assess implications for national policies, procedures, and management systems. It would sponsor approriate measures to achieve broader application of lessons learned from the learning laboratories. It would also take steps to identify examples of particularly successful health program activities from both public and private sectors in Indonesia and to document these as sources of additional insights. Basically this Working Group would be the mechanism for managing a nation-wide learning process relating to development of capacities of manage a decentralized health system in Indonesia.

Element 3: This element involves the development of effective communication linkages between the learning laboratories themselves, the management units directly responsible for learning laboratory development, and the National Working Group. Two basic mechanisms are suggested. The first consists of periodic workshops for review and analysis of emerging experience. These should be structured to provide maximum engagement with issues raised by special studies, and operational experience. These workshops are for mutual learning, problem solving, and planning. They are not for conventional teaching where one person communicates knowledge and skills to another and they are not for purposes of exercising supervisory control.

5. Key System Elements at Provincial and Kabupatan Level

The NHS (pp. 77-80) indicates that resource allocation planning and decision-making is to be transferred eventually to the province, with the kabupatan being responsible for operational planning. Planning for the learning laboratory should be based initially on the presumption of this eventual division of responsibility. Presumably the model would involve priorities being generated from kabupatan and below, but with actual decision authority residing in the province.

The concern is not to develop a standard program. Rather it is to develop the systems by which programs responsive to particular local needs and to national guidelines are developed and carried out. These systems will involve three components or subsystems which will each need discrete attention and will likely involve different though related and even overlapping management systems.

Sub-system 1: Diagnostic and Planning. This would likely be centered in the provincial and kabupatan planning offices. The concern would be with development and monitoring of data on health conditions, causes, and resources as a basis for establishing priorities and mobilizing kabupatan-wide resources to address them. Some of these priorities would of course be the natural province of the health system itself. Others might involve attempting to influence the priorities of other sectoral agencies in response to health concerns. For example the diagnostic process might reveal areas where a lack of potable water facilities is having particularly detrimental consequences in terms of health status. Efforts would be made through the provincial and kabupatan planning process to influence priorities of the relevant agencies accordingly. The responsible units would be the locus of epidemiological and other studies necessary for effective health planning, as well as for interpretation of operating statistics from the health system.

Sub-system 2: Health Facilities and Services. This sub-system is primarily concerned with clinic-based services and the management of medical personnel attending to clinic consultations. It has its own particular skill and management requirements. While it will address preventive concerns, its primary focus is on the effective and efficient provision of necessary curative services in government-run health facilities. It is a major need and presents important management demands in its own right.

Sub-system 3: Community Mobilization to Address Health Needs. This sub-system is concerned particularly with health activities that take place within the community outside the clinic walls and address primarily preventive and environmental health concerns. It involves development of community health committees, working with mothers groups, training and support of village health volunteers, etc. It deals with development of interests and skills in self-care activities and the training and support of indigenous health practitioners. It has quite different demands and requires rather different skills than normal clinic based activities.

These three sub-systems must be effectively related and their management may overlap in various ways, but at the same time the special requirements of each must be given explicit attention.

Seminars & Workshops Assisted by Project Staff

ASSISTED BY	TOPIC	WHERE HELD	DATE	PARTICIPANTS
Hornby	Seminar on Research Methods/Management	F.K.M.	Oct/Nov 1982	Staff/students FKM
Shipp	Client Oriented Research	Litbangkes	Dec 1981	Senior Min. Staff
Shipp	Client Oriented Research	Litbangkes	March 1982	Puslit Chiefs
Hornby	Client Oriented Research	P4K	July 1982	P4K Staff
Solter	Puskesmas Staff Utilization	Litbangkes	March 1982	Senior Min. Staff
Rousselle/ Hornby	Management Information Systems	Litbangkes	Nov 1982	Min. Inform. Staff
Hornby	Methods of Manpower Planning	National Health Conference	March 1981	Senior Min. and Provincial Staff
Porcher	Scientific Report and Writing	Litbangkes	Oct 1981	Technical Staff
Porcher	Scientific Report and Writing	P4K	Nov 1981	Technical Staff
Solter	Technical Short Courses (7).	Litbangkes	1981-1982	Technical Staff at Litbangkes
Hornby	Manpower Planning in the long term	Puncak	March 1981	Central and Provincial planning staff
Shipp	Development of Human Resources	Puncak	Feb 1983	Senior Provincial and Central Staff
Hapsara/ Shipp	Careers for Pharmacists	P.O.M.	Jan 1983	Senior Staff P.O.M.

Long and Short Term Consultants
Provided by Project to January 31, 1983

NAME	FROM	ASSIGNMENT AREA	APPROX. CONSULTANT EFFORT (PERSON - MONTHS)
LONG-TERM			
Hornby	M.S.H.	Planning	23
Solter	M.S.H.	Research	24
Lynton	KOBA	Training	16
Lioni (resigned)	KOBA	Personnel	6
SHORT-TERM			
Shipp	M.S.H.	Personnel/Planning	12
Mico	Third Party Ass. (California)	Health Education	7 1/2
Ross	San Jose State University	Health Education	5 1/2
Taylor	Johns Hopkins	Research	1 1/2
Porcher	C.D.C. (Atlanta)	Research	1
Rousselle	M.S.H.	M. Infor. Syst/Res.	1 1/2
Beery	H.S. Research Centre. Univ. N.Car.	Training	delayed because sick
H.R. Lynton	Independent Consultant	Training	2
Gant	Florida State University	Training	1
Pareek	Inst. of Management-Ahmedabad	Training	1
Schaeffer	Univ. of N.	Research	1/2

EXPECTED BUT NOT YET CONFIRMED

O'Byrne	Indep. Cons. (previously Univ. Hawaii)	Training/Personnel
Lyons	Indep. Cons. (previously Univ. Hawaii)	Training/Personnel
Haddart	Indep. Cons. (Previously Wessex England Reg: Hospital Board)	M.I. System/Personnel

4.8. Relationships between the University of Indonesia School of Public Health/Johns Hopkins University Project and Indonesia Health Training, Research and Development Project.

The evaluation team has read the reports of the Indonesia University School of Public Health/Johns Hopkins University Project. Within the field of post graduate education, its objectives could be considered complementary to those of Indonesia project (497-0273). This complementarity can be clearly seen in the areas of health planning, training of provincial planners, and research. With regard to the latter, the "mapping process" -- at present being developed at the Center for Health Services Research in Surabaya -- should result in specific areas of investigation stemming from an active dialogue between providers of research information and users of it.

It can be stated that there is no duplication between the two projects but, as mentioned, actual complementarity among specific fields. There is at present fairly good coordination.

In the light of the proposals the evaluation team makes in this report, the suggestion of a functional and administrative integration between the two projects should be explored.

Appendix 5.1

Abbreviations and Acronyms

BAPPEDA	Provincial Development Planning Board
BAPPENAS	National Development Planning Board
BIRO KEPEGAWAIAN	Bureau of Personnel
BIRO PERENCANAAN	Bureau of Planning
B.K.I.A.	Balai Kesejahteraan Ibu dan Anak: Maternal-Child Health Center (Simple Outpatient clinic usually staffed by an auxiliary nurse or midwife)
B.K.K.B.N.	Badan Koordinasi Keluarga Berencana National: National Family Planning Coordinating Board
BUPATI	Head of the Kabupaten (Regency) Government
CAMAT	Head of the Sub-District Government
CHIPPS	Comprehensive Health Improvement Program-Province Specific
DEPKES	Department Kesehatan: Department of Health
DESA	Village
DINAS KESEHATAN	Office of Provincial Health Service Implementation
DOKABU	Head of the Kabupaten Government Health Service
E.P.I.	Expanded Program of Immunization
F.K.	Fakultas Kedokteran: Medical School
F.K.M.	School of Public Health
Gotong Royong	Cooperative mutual aid as traditionally practiced in Indonesia village
H.M.P.	Health Manpower Planning

KABUPATEN	Regency or District
KADER	Village Volunteer
KAKANWIL	Head of Provincial Health Services
KANWIL KESEHATAN	Office of Representative of Ministry of Health in each province
KECAMATAN	Sub-District
KOTAMADYA	Municipality, an urban center of the kabupaten headed by a Walikota, or mayor
L.A.N.	National Institute for Administration
LITBANGKES NIHRD	National Institutes of Health Research and Development
L.K.M.D.	Lembaga Ketahanan Masyarakat Desa: Village Committee
LTHP	Long-Term Health Plan
LURAH	Village Chief
PEMERATAAN	'Equalization' in distribution of Services to Provinces
PUSDIKLAT	Pusat Pendidikan dan Latihan (Center for Training and Education)
PK	Perawat Kesehatan: Primary Health Nurse
P.K.M.D.	Pembangunan Kesehatan Masyarakat Desa: Primary Health Care Model for Indonesia
POLICLINIC	Small, simple, outpatient clinic
PROKESA	Promotor Kesehatan Desa: Health Promotor at village level
PUSKESMAS	Pusat Kesehatan Masyarakat: Community Health Center, generally at kecematan level
PUSAT	Central Government Level
RAKORPIM	Ministry of Health 'cabinet' made up of various Directors General

(RE) PELITA III	Third 5 year Development, 1979-1983
(RE) PELITA IV	Fourth 5 year Development, 1984-1989
S.K.N.	System Kesehatan National - National Health System
S.P.K.	Sekolah Perawat Kesehatan: Nursing School
S.P.P.H.	Rural Sanitarian School

Appendix 5.2

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Appendix 5.3

Persons Interviewed

Dr. Timothy Baker
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Dr. Burhanuddin
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Office of Manpower Planning
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William P. Fuller
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N.I.H.R.D

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Chief, Bureau of Planning
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Dr. Sukanto Sumodinoto
Community Research
N.I.H.R.D.

Dr. Carl E. Taylor
KOBA, Consultant in Research

Appendix 5.4

Partial Listing of Health Manpower Planning Documents Prepared with Assistance from Project Consultants. March 1980 - February 1983.

Title: Looking into the Future - The Implications for Manpower

Date : March 1980

Contents: Study of Staffing Levels of 9 hospitals in Aceh. Analysed by number of staff as % of establishment.

Category	Range (%)	Average (%)
Doctors	0 - 67	35
Nurses	17 - 100	41
Paramedical	10 - 57	27
Non-Medical	0 - 54	24
All Categories	13 - 70	33
Bed Occupancy	15 - 75	53

Title: Information Requirements and Available Sources of Information for Health Manpower Planning.

Date: n.d.

Contents: Demographic data, environmental, economic characteristics.
Health needs.
Utilization of health care facilities.
Health manpower training.
Supply of health manpower.
Health manpower planning in national context.

Title: Proposed Analysis of H.M.S.R. Data.

Date: 1981

Contents: Proposed analysis of data from provinces.
17 categories of staff.
15 types of health establishment.
Data includes leave, days lost, training, sickness.
Computerized calculations over 12 month period.

Title: Determining the Current Manpower Situation: Data Collection for Long Term Health Manpower Development Plan (Gunawan and Shipp).

Date: August 1981

Contents: Current staffing situation.
Current Puskesmas workloads and manpower requirements.

Title: Looking to the Future - the Implication for Manpower.

Date: August 1981

Contents: Situation analysis. Study based on province of Aceh.
Gap between existing staff and future needs.
Problems.
Geographic distribution of 4 categories of staff.
Hospital and Puskesmas staffing.

Title: Planning for Manpower in the Programme Planning Phase of the Long Term National Health PLan.

Date: August 1981 1st Edition
December 1981 2nd Edition

Contents: Overview.
Steps in Health Manpower Planning
HMP calculations
Appendices:
1. Method of calculation of volume of work or work required.
2. Sample manpower calculation for MCH programme objective.
3. Method of calculation of manpower requirement to undertake volume of work.
4. Method of Calculation of Training required to attain manpower targets.

Title: Collecting Information on Health Pesonnel to Work Out Master Plan for Long Term Health Development Program.

Date: December 1981

Contents: Date Collection Forms I & II.
Instructions.
Data include: categories.
numbers now and at end R III.
shortages.
posts vacant.

Title: Health Manpower Situation Report

Date: February 1982

Contents: Describes current staff and staffing situation.
Identifies current manpower problems
As of March 31, 1981, 103,000 MOH employees in 92 categories.
Average 6.8 staff/10,000 population.
Range 2.3 to 26.5

Title: Puskesmas Manpower Utlization Study

Date: March 1982

Contents: Study of staff activities in 8 Puskesmas, 4 in central Java, 4 in South Sulawesi. 4 rural.
Average findings show that staff spend
43.1 % time in non-productive activities.
16 % in direct services.
25 % in administration.
6-7 % time spent in field.

Undertake activities for which they are not trained. Job descriptions need to be clarified and standardized. Additional training courses needed.

Title: Prosedur Dan Cara Penyusunan Keperluan Tenaga Kesehatan. Untuk Menunjang Pelaksanaan Rencana Pokok Program Pembangunan Jangka Panjang Bidang Kesehatan (RP3JPK Manpower Calculations).

Date: May 1982

Contents: Objectives & Basic Strategy
Manpower requirements based on volume of activities or number of establishments.
Calculation of volume of service
Calculation of health service activities.
Summary Requirements.
Model Forms & Instructions.

Title: Analisa Penyusunan Penyediaan Tenaga Kesehatan. (Health Manpower Supply Study).

Date: June 1982

Contents: Health Manpower projections thru 2000
Current staff remaining
New graduates
New recruits
Total staff
Factors affecting future supply

Title: Case Study: Indonesia. Developments in Health Manpower Planning and Management (Hapsara).

Date: October 1982

Contents: Background & present situation
Evolution of Man Management
Manpower Planning
Training
Overall Manpower System
Milestones in the Development of Health Manpower Management.

Title: Proposed P IV Health Manpower Plan

Date: December 1982

Contents: Developmental Stages of Planning Process.
Details of steps to provide data for 25 staff categories by 13 working groups.
Outline of content of provincial plans.
a. Current staff
b. Proposed increment by category
c. Proposed increase or decrease in supply
d. Planned import/export of staff
e. Staff increases by service (MCH, hospitals, etc.)
f. Proposed increase in productivity.

Title: Health Manpower Planning for R IV

Date: February 1983

Contents: Set of Draft Documents, Tables, Forms for use by the 14 Working Groups.
Form A1 Estimated Staffing Level at end of R III.
Form B1 Estimated Staffing Level at end of R IV.
Form C1 Expected Service Coverage at end of R IV.
Form D1 Allocation to Provinces of Extra Staff Planned During R IV.

Data tables: Manpower Requirements & Supply thru 2000.

National Population Statistics 1988/9.

Forecast Province Population Statistics 1988/9.

Appendix 5.5

Proposal For Establishment Of Network Of Field Research Areas -- Dr. Carl E. Taylor

The multiple objectives of adapting primary health care and national policies to the specific needs of the various parts of Indonesia can be greatly facilitated by developing in each major region a field research area. This would provide a field laboratory for conducting specific research projects needs to fill present gaps in knowledge important for the development of health services and improvement of health status. It would provide a general data base so that each individual research project could be developed more cost/effectively rather than always having to start from the beginning in setting up field arrangements. It would provide a continuing framework to build and maintain competence in research and development. It would provide a training base for beginning research workers. It would systematize the process of consultation between health service personnel and research teams on problems in health care for which solutions are needed. It would provide a continuing mechanism for feeding information back into the services from research findings. It would permit field trials of alternative new interventions and of new patterns of manpower utilization based on a more practical process of task analysis and job description adapted to varying local conditions. It would provide a systematic base for simplifying and adapting the health information system.

In addition to these research and development functions the area could be used as a field training base for all categories of health personnel and would make it possible to take educational activities into situations where community-side teaching for the whole health team would be possible.

By using an entire kabupaten for the field research area the recurring problem of community fatigue would be avoided. With about a million population and 20 health centers there is sufficient opportunity to move projects and training activities around so that people do not resent intrusions on their time. Comparison groups can be obtained readily with an experimental group in one study serving as a control for a different kind of investigation.

The essential features of the core effort are:
1) To develop a continuing data base for routine information such as causes of death, vital rates and population denominators.

2) To provide an organizational base in which minimum services are functioning so that interventions can be introduced and tested.

To establish these components a partnership is needed between a local academic research-oriented institution and the provincial health services. Carefully selected staff from both would work part-time to maintain the core activity. Approximately 3 professionals from the university and 3 from the staff of a selected kabupaten would form the research coordination team. In addition full-time statistical staff for data gathering and analysis would maintain the data base and be available to participate in special studies. No buildings or other capital costs would be needed because existing facilities would be used. A heavy investment in local transportation would be needed.

The international consultant team would provide carefully selected expertise in developing the very special kind of field guidance needed. The primary emphasis would be on building competence in Indonesia service institutions. The two institutions that have the most expertise that can be used for local consultant are P4K in Surabaya and FKM Jakarta.

Appendix 5.6

DRAFT
March 11, 1983

To: David Calder
From: David Korten
Re: Suggested USAID strategy in support of Indonesian policies and priorities in health development

1. GOI Policies and Priorities. The GOI has developed a sound policy framework for health development in Indonesia, with particular attention to the central role of the community and the importance of public participation in defining needs, setting priorities, and planning and implementing programs responsive to these priorities. [See National Health System (translation), p. 71. Referred to subsequently as NHS.] According to the NHS (p. 80) implementation of the policy is to be based on the principles of "deconcentration, decentralization and assistance."

The rationale is clear and was called to our attention repeatedly. Dr. Hapsara, Head of the Planning Office of the Ministry of Health, stressed that Indonesia is a diverse country. Each area not only has its own distinctive health needs, it also has its own socio-cultural setting. Dr. Soebekti, Director General of Community Health, argued that approaches which work well in one area of the country may well flop in another area where the population is different. He also stressed the importance of starting with the priorities of the people in any given community, rather than those of the Ministry of Health. He noted this may often even require giving attention first to non-health related needs. The NHS (p. 32) further states that "Health efforts should be adjusted to demographic, geographic, socio-cultural and economic factors and the possibility of different developments in accordance with local conditions."

Dr. Hapsara observed that the basic national programs and strategy are in place. He now sees it being up to the provinces and kabupatens to find what will work within this framework in response to their own needs and setting. He stressed the need is now to focus on real problems in the field. He acknowledged the need for epidemiological monitoring and analysis at provincial and kabupatan levels as a basis for defining local priorities and evolving the best ways of addressing them given available resources. He also acknowledged the need for substantial decentralization to make this possible. Dr. Soebekti highlighted similar themes. He made it clear that the concepts have been formulated, but that the Ministry must now learn how to implement them though actual

doing. He stressed the need for appropriate tools of implementation that could be applied across the country while at the same time being responsive to differing local conditions. The NHS (p. 29) acknowledges that "...the organization and procedures of the system of health care applied by the central as well as regional governments and the community, are not formuated in detail yet."

There is a realization that effective local action on the nationally mandated policy of a decentralized health system responsive to local needs depends on building the requisite capabilities, especially in management. Both Drs. Hapsara and Soebekti stressed the need to strengthen management capability at provincial and kabupatan levels. So does the NHS (p. 67), which calls on central government to gradually give real autonomy and responsibility to the regional governments as they develop the requisite capability in health management.

It seems evident that a critical gap currently exists between policy commitment and operational reality. The government has defined what it wants to do in health, but at the same time feels it does not yet know how. There are no identified prototypes for the processes of local health development envisioned. It is not looking for outsiders to tell it how. It currently seeks to develop its own solutions appropriate to Indonesian realities and aspirations through its own experience. To this end it has designated a number of "pioneering" provinces in which innovative efforts are being encouraged. It remains to develop these efforts in ways which will rapidly generate learning useful on a larger scale--and the capacity to apply that learning. It is my impression from our discussions that supportive collaboration of outsiders in strengthening the learning process in which the Ministry is already engaged is welcomed--as evidence by ongoing collaboration with USAID in various areas.

2. An Appropriate Support Role for USAID.

USAID/Indonesia is well positioned by way of its present project portfolio to provide effective and responsive support to the GOI in realizing its policy commitment to development of a locally responsive, decentralized national health system. Making such support the central theme of the Mission's health program strategy over the next 10 to 15 years would also be consistent with the institutional development theme articulated in the Mission's most recent CDSS. The proposed program strategy would make clear the linkages between current and anticipated USAID supported health projects.

3. Assumptions Underlying the Proposed Strategic Framework

a. As argued by Dr. Soebekti, the tools or systems required to implement the GOI's policy must be developed out of field experience. They cannot be designed centrally out of the heads of experts.

b. Existing centrally mandated systems, procedures and working norms seriously inhibit the innovative and adaptive behaviors required at provincial and kabupatan levels. Yet people at the center are understandably reluctant to make precipitous changes in systems and procedures which might prove inappropriate, or to delegate authority without reasonable assurance that it will be used well.

c. The concept of looking to a small number of "pioneering" provinces and kabupatans is a sound response to the current priority need of the health system. A small number of these can usefully serve the larger system as learning laboratories to: 1) develop prototype methodologies and systems able to support the decentralized health programming processes envisioned in current national policy; 2) to develop the individual and institutional competence eventually required to support their introduction in other provinces and kabupatans; and 3) to illuminate needs for specific supporting changes in central systems, regulations, and management styles and allow for relatively small scale trial and adaptation before nation-wide introduction.

4. Three Basic Elements of the Strategy

Element 1: Designate one kabupatan in each of the three HTR&D project provinces (West Sumatra, Central Java, and South Sulawesi) as a learning laboratory in which intensive attention is given to development of needed prototypes. Beginning with diagnostic workshops attended by relevant officials, basic data gathering and analytical work would be carried out as a basis for determining priorities and developing program approaches responsive to the local setting and consistent with national guidelines. Operational authority would reside with kabupatan officials normally responsible for health program management at that level. Technical support would be provided under the supervision of the province so that provincial capability to extend lessons to other kabupatans is being developed coincidentally with the initial kabupatan efforts. This support would be obtained primarily though collaborative arrangements with Indonesian resource institutions such as FKM and the regional medical schools. The use of Indonesian resource institutions would be intended in part to tap their existing expertise, but even more important to facilitate their own further development as effective resources to support the expansion process as effective replicable systems are developed.

Element 2: Establish a National Community Health Development Working Group chaired by the Director General of Community Health. It would include as participants a few key individuals with a particular commitment to the decentalization effort with responsible positions in relevant units of the Ministry of Health, BAPENAS, Ministry of Budget, and the Ministry of Home Affairs. It would also include participation from participating resource institutions, USAID, and the HTR&D technical assistance contractor. This Working Group would advise on learning laboratory development, provide legitimacy for experimental activities, take steps to provide needed budgetary flexibility, and provide any other special support required. It would closely monitor activities in the learning laboratories to assess implications for national policies, procedures, and management systems. It would sponsor approriate measures to achieve broader application of lessons learned from the learning laboratories. It would also take steps to identify examples of particularly successful health program activities from both public and private sectors in Indonesia and to document these as sources of additional insights. Basically this Working Group would be the mechanism for managing a nation-wide learning process relating to development of capacities of manage a decentralized health system in Indonesia.

Element 3: This element involves the development of effective communication linkages between the learning laboratories themselves, the management units directly responsible for learning laboratory development, and the National Working Group. Two basic mechanisms are suggested. The first consists of periodic workshops for review and analysis of emerging experience. These should be structured to provide maximum engagement with issues raised by special studies, and operational experience. These workshops are for mutual learning, problem solving, and planning. They are not for conventional teaching where one person communicates knowledge and skills to another and they are not for purposes of exercising supervisory control.

5. Key System Elements at Provincial and Kabupatan Level

The NHS (pp. 77-80) indicates that resource allocation planning and decision-making is to be transferred eventually to the province, with the kabupatan being responsible for operational planning. Planning for the learning laboratory should be based initially on the presumption of this eventual division of responsibility. Presumably the model would involve priorities being generated from kabupatan and below, but with actual decision authority residing in the province.

The concern is not to develop a standard program. Rather it is to develop the systems by which programs responsive to particular local needs and to national guidelines are developed and carried out. These systems will involve three components or subsystems which will each need discrete attention and will likely involve different though related and even overlapping management systems.

Sub-system 1: Diagnostic and Planning. This would likely be centered in the provincial and kabupatan planning offices. The concern would be with development and monitoring of data on health conditions, causes, and resources as a basis for establishing priorities and mobilizing kabupatan-wide resources to address them. Some of these priorities would of course be the natural province of the health system itself. Others might involve attempting to influence the priorities of other sectoral agencies in response to health concerns. For example the diagnostic process might reveal areas where a lack of potable water facilities is having particularly detrimental consequences in terms of health status. Efforts would be made through the provincial and kabupatan planning process to influence priorities of the relevant agencies accordingly. The responsible units would be the locus of epidemiological and other studies necessary for effective health planning, as well as for interpretation of operating statistics from the health system.

Sub-system 2: Health Facilities and Services. This sub-system is primarily concerned with clinic-based services and the management of medical personnel attending to clinic consultations. It has its own particular skill and management requirements. While it will address preventive concerns, its primary focus is on the effective and efficient provision of necessary curative services in government-run health facilities. It is a major need and presents important management demands in its own right.

Sub-system 3: Community Mobilization to Address Health Needs. This sub-system is concerned particularly with health activities that take place within the community outside the clinic walls and address primarily preventive and environmental health concerns. It involves development of community health committees, working with mothers groups, training and support of village health volunteers, etc. It deals with development of interests and skills in self-care activities and the training and support of indigenous health practitioners. It has quite different demands and requires rather different skills than normal clinic based activities.

These three sub-systems must be effectively related and their management may overlap in various ways, but at the same time the special requirements of each must be given explicit attention.